

THE IDENTIFICATION OF INDIAN BUTTERFLIES.

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(Continued from page 96 of this Volume.)

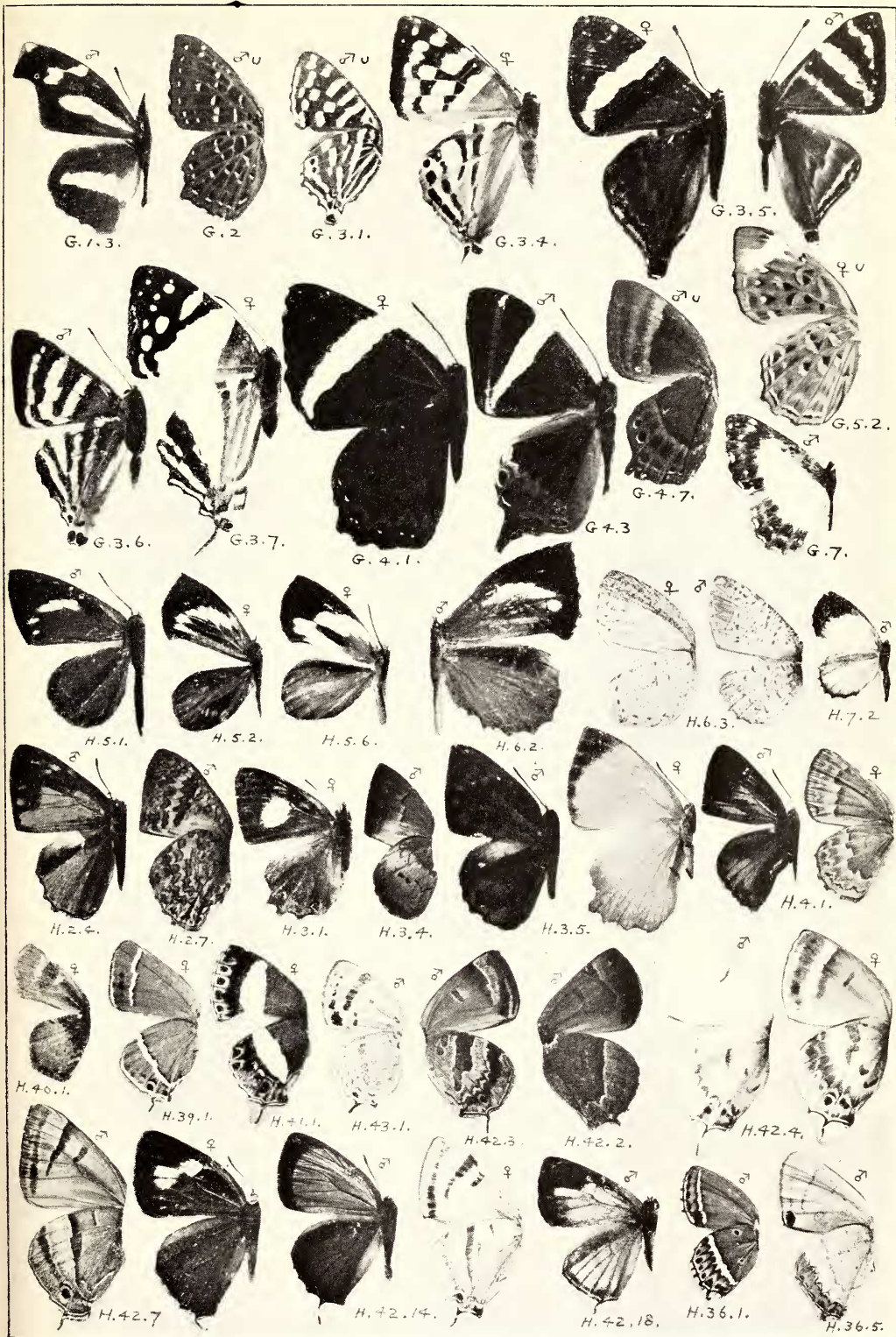
Part VI.

*(With 2 Plates).***G. Erycinidæ.—The Erycinids. Key to Genera.**

- 1 (2a). Palpi porrect and enormously long, like a beak or snout.
Libytheinæ. Single genus *Libythea*, *E*. The Beaks. (Plate 26).
- 2a (1). Palpi small, do not project beyond face.
Riodininae.
- 2b (4a). H. precostal from origin of v8.
- 2 (3). H vs. 6 and 7 from upper end of cell ; 3 and 4 from lower end cell.
F lower end dev at origin v3. H not lobed. Eyes smooth.
Zemeros, *Bdv*. The Punchinello. (Plate 26).
- 3 (2). H vs 6 and 7 forked after end cell ; v3 from before end cell.
F end dev after origin v3. H produced and lobed. Eyes hairy.
Dodona, *Hew*. The Punches. (Plate 26).
- 4a (2b). H precostal from after origin v8 ; vs 6 and 7 forked after end cell.
v3 from before end cell. F end dev after origin v3.
- 4b (7). H v8 long, ends beyond origin v6 ; v7 to apex.
- 4c (6). No ♂ brand.
- 4 (5). H cell long and narrow at base ; scv and mv convergent at base.
Eyes hairy.
Abisara, *Fd*. The Judies. (Plate 26).
- 5 (4). H cell short and broad at base ; scv and mv parallel ; scv parallel to v8, sharply angled opposite precostal. Eyes smooth.
Taxila, *Db*. The Harlequins. (Plate 26).
- 6 (4c). ♂ F dorsum much bowed, covering a brand uph on a nacreous area below costa. ♂ ♀ dev H at right angles to vs 4 and 6, not inclined as usual.
Laxita, *But*. The Red Harlequin.
- 7 (4b). H v8 very short, ends before end cell ; v7 very short also and ends long before the apex. Base cell as in No. 5. Eyes hairy.
Stiboges, *But*. The Columbine. (Plate 26).

G.1. Libythea.—The Beaks. (Plate 26).

- 1a (4). Upf prominent ochreous streak in cell from base.
- 1 (2a). Upf ochreous spot in 1. All ochreous markings very broad.
H costa concave before apex and termen concave below apex.
celtis, *Fuess*. (45-50). The European Beak. Chitral. NR.
- 2a (1). Upf no ochreous spot in 1. H costa and termen straight on either side of apex.
- 2 (3). Upf ochreous spot beyond cell streak quadrate, separate or only joined to cell streak by a narrow neck.
- a. Upf cell divided in 2 before end cell ; all apical spots white. Uph white quadrate spot mid costa.
lepita lepitoides, *M*. (45-50). The Common Beak. Ceylon. S. India. NR.
- β. Upf cell streak not divided ; lowest apical spot ochreous.
Uph rarely with white quadrate spot mid costa.
lepita lepita, *M*. Kashmir—N Burma. C.
- 3 (2). Upf ochreous spot beyond cell oval, joined to spot end cell, making an even edged continuous club shaped streak.
- a. Above ochreous markings F and H narrow ; upf apical spots white.
Uph band not to dorsum.



G. Erycinidae. H. 1-3. Poritiinae: H. 4-6. Gerydinae.
 H. Lycaenidae. H. 37-43. Thecla Group: H. 36. Ilterda.

G.1. Libythea—(contd.)

myrrha rama, *M.* (45-55). The Club Beak. Ceylon. C.
 β. Above ochreous markings slightly wider. Upf usually 2 apical spots white and lower 2 ochreous.

myrrha carma, *Fruh.* S. India. C.

γ. Above ochreous markings wide. Upf all apical spots yellow.
 Uph band to dorsum.

**myrrha sanguinalis*, *Fruh.* Kulu—Burma. C.

4a (1a). Upf no ochreous streak from base cell.

4 (5). Upf dark brown, white spot end cell and mid 2 as well as the usual apical spots; uph narrow macular white band. In ♀ the markings above are tinged ochreous.

narina rohini, *Mar.* (50-55). The Whitespotted Beak. Assam—Burma. R.

5 (4). Above pale blue with fuscous margins, unspotted except at apex. In typical form the fuscous margins and apex upf are broad, with the apical spots sharply marked.

geoffroyi alompra, *M.* (50-60). The Blue Beak. S. Burma. R.

v. hauxwelli, *DeN.* Upf the fuscous margin and apex narrow; uph white spots obscure, but all markings showing through from below. R.

G.2. Zemerus.—The Punchinello. (Plate 26.)

Above purple brown with small white spots. In DSF the white apical spots are enlarged.

**flegyas indicus*, *Fruh.* (35-40). The Punchinello. Mussoorie—Burma. VC.

G.3. Dodona. The Panches. (Plate 26.)

1a (6a). Unh 2 small black spots just before the apex.

1b (5). Upf spotted, not striped.

1 (2a). Upf an ochreous bar end cell, as well as a bar in cell and beyond. No tail. Above dark brown with prominent ochreous spots on upf.

**durga*, *Koll.* (30-40). The Common Punch. Kashmir—Nepal. VC.

2a (1). Upf no ochreous bar end cell.

2b (4). Above dark brown; uph markings obscure.

2 (3). H not tailed. Below markings narrow; unf costal spot and white bar end cell usually separate, if joined, costal spot shifted in. Unh pale bands narrow and of equal width.

a. Smaller and paler. Uph ♂ unmarked; unh markings very obscure. ♀ below markings yellow.

dipca nostia, *Fruh.* (35-40). The Lesser Punch. Murree—Kumaon. R.

β. Larger, darker. Above markings ochreous. Below markings much more developed and white.

dipca dipca, *Hew.* (40-45). Sikkim—Assam. R.

γ. As last, markings very small. Below reddish ochreous, clear white narrow markings; unh lobe divided by an ochreous line.

dipca dracon, *DeN.* N. Burma. VR.

3 (2). H tailed. Below markings broader; unf costal spot coalesced to bar end cell. Unh silver bar through mid cell and bar before apex wide, wider than the other markings.

a. Small. Upf in ♂ spots whitish.

eugenes eugenes, *Bates.* (35-40). The Tailed Punch. Murree—Kumaon. NR.

β. Larger and darker. ♂ upf spots ochreous and unf basal and central markings pale yellow.

eugenes venox, *Fruh.* (40-45). Sikkim—Assam. NR.

4 (2b.). Upf reddish ochreous in ♂, yellow in ♀, with dark bands. Upf black, bases dark ochreous brown, large reddish ochreous spots in ♂, yellow in ♀. Below ferruginous brown.

G. 3. Dodona—(contd.)

**egeon*, *Db.* (45-50). The Orange Punch. Nepal—Karens. R.

5 (1b). Upf striped, orange band in ♂, white in ♀; discal band from mid costa to tornus. Unf bands very obscure and highly irregular. No tail.

α Paler. ♂ upf orange discal band very wide, wider than the black bands on either side. ♀ white band even edged to the spot in 1, which is shifted out. *oida phlegra*, *Fruh.* (40-55). The Mixed Punch. Mussoorie—Nepal. NR.

β. Darker. ♂ discal band narrow; ♀ irregular, spot in 1 small.

**oida oida*, *M.* Nepal—Karens. NR.

6a (1a). Unh no black spots just below apex.

6 (7). Above orange banded. Below pale yellow with narrow black bands. No tail.

α. Upf base dark ochreous brown.

**adonira adonira*, *Hew.* (40-50). The Striped Punch. Nepal, Sikkim-Assam. R.

β. Upf base black. Below dark bands are brown and unh with prominent silver stripes.

adonira argentea, *Fruh.* N. Burma. (Fruh). VR.

7 (6). Above very dark brown, with a white band across both wings: apex F white spotted. H with long tail.

α. Above white band narrow = $\frac{1}{3}$ th wing and upf spot beyond cell small and obscure; marginal and submarginal spots diffused.

deodata, *longicaudata*, *DeN.* (40-50). The White Punch. Assam. VR.

β. WSF ♂ white band = $\frac{1}{3}$ rd wing and upf spot beyond cell and spot in 3 sharp and prominent, remaining apical spots obscure. WSF ♀ white band very broad and white spot beyond cell extending to costa; uph base white striped. ♂ DSF bases F and H white striped. ♀ DSF almost entirely white.

**deodata deodata*, *Hew.* Shan States—S. Burma. R.

G.4. Abisara.—The Judies. (Plate 26).

1a (4a). Upf prominent broad pale band from mid costa across end cell, or just beyond, to tornus.

1 (2a). H slightly produced at v4. Above dark brown, ♂ with yellow band upf, which is white in ♀.

**fylla*, *Db.* (50-60). The Dark Judy. Mussoorie—Burma. C.

2a (1). H with long tail at v4, tipped white. Above brown, band white.

2 (3). Upf no prominent white spot at upper end of postdiscal dusky pale line; discal band always slightly sinuous.

α. Small. Upf discal band narrow and constricted at ends.

neophron neophronides, *Fruh.* The Tailed Judy. Sikkim—Nepal. NR.

β. As last, but larger.

neophron neophron, *Hew.* (50-55). Assam—N. Burma. NR.

γ. Upf band not constricted at upper end.

neophron gratius, *Fruh.* Karens—S. Burma. NR.

3 (2). Upf prominent white spot at upper end of postdiscal pale dusky band. Very like last.

α. Small and dark. Upf bands narrow and constricted at ends.

chela chela, *DeN.* (45-50). The Spot Judy. Sikkim—Assam. VR.

β. Larger and paler. Upf discal band absolutely straight, expanding to costa and spreading slightly along costa, edges pale yellow, especially at costa; meets postdiscal band at v1. Uph marginal markings small and discal line evenly zig-zagged throughout.

**chela kalavna*, *Evans.* (50-55). Kalaw, S. Shan States. VR.

4a (1a). Upf pale band, if present, well beyond end cell.

4 (5a). H with a long tail at v4, tipped white.

α. Upf and Uph a narrow white discal band; upf dusky pale postdiscal line meets discal band at v1. Above bright maroon.

savitri attenuata, *Tyt.* (50). The Malay Tailed Judy. Manipur. VR.

G. 4. Abisara.—(contd.)

β. Above dark ferruginous brown; upf 2 pale dusky parallel bands. Below bright ferruginous.

savitri savitri, *Fd.* (50-55). Mergui. VR.

5a (4). H may be angled or produced at v4, but never with a white tipped tail.

5b (8). Uph at most a single pale brown discal band. Above purple brown or maroon. Uph discal and postdiscal bands separate throughout.

5 (6a). Upf the discal and postdiscal band divergent to costa, never parallel.

a. Wsf ♂ very uniform above, dark and brilliantly purple shot; discal band upf nearly straight. DSF smaller and only slightly different. ♀ band pale brown throughout.

echeirus prunosa, *M.* (42-50). The Plum Judy. Ceylon—Palnis. C.

β. Smaller and paler, less brilliantly shot. DSF sharply marked and ♂ above outwardly paler; discal band upf more angled. ♀ often with upper part of the discal band white upf.

echeirus suffusa, *M.* (40-50). Kanara—Himalayas. C.

γ. Unf discal band always white at upper end and angled in middle. ♀ upf discal band always white at upper end in WSF. Very variable and seasonal forms sharply marked as in last.

echeirus angulata, *M.* (40-45.) Assam—Karens. C.

δ. As last but discal band upf is usually white at the upper end. Darker.

echeirus abnormis, *M.* (40-50.) Dawnas—S. Burma. C.

η. Much larger. ♂ upf and unf discal band never white, very broad unf. ♀ upf bands very broadly white at upper end and highly angled.

echeirus bifasciata, *M.* (50-55). Andamans and Nicobars. NR.

6a (5). Upf discal and post discal bands parallel, never angled, though may be evenly curved. Unh discal band very even.

6 (7). ♂ above bands visible. ♀ unf bands separate throughout.

a. Larger. ♂ upf bands diffuse and not paler at upper end. ♀ upf bands broad, diffuse and white.

**kausambi paionea*, *Fruh.* (42-46). The Straight Plum Judy. Manipur—Tavoy. R.

β. Smaller. ♂ upf bands prominently paler and wider at upper end. ♀ bands whiter.

kausambi kausambi, *Fd.* (42-46). Mergui—S. Burma. R.

7 (6). ♂ above very dark rich purple brown, unmarked; Unf bands narrow, plumbeous. ♀ upf a sharply defined white pre-apical patch uniting the bands at their upper end.

kausambioides, *DeN.* (40-45). The Malayan Plum Judy. Mergui—S. Burma. R.

8 (5b). Above ochreous red; F. and H with inwardly black edged narrow, macular, discal bands and subterminal white line. Uph no black spots at apex as usual.

burnii, *DeN.* (40-45). Burns^s Judy. N. Burma. VR.

G5. Taxila.—The Harlequins. (Plate 26).

1 (2). Unf discal band of inwardly black edged metallic blue spots in a regular line. Unh postdiscal band of similar spots regular and prominent. ♀ upf apical white patch crossed by ochreous veins.

thaisio sawaja, *Fruh.* (35-45). The Lesser Harlequin. Karens—S. Burma. NR.

2 (1). Unf spot in 3 of discal band pushed out. Unh postdiscal spots obscure. ♀ upf white apical patch diffuse and not crossed by ochreous veins.

**haquinus fasciata*, *M.* (45-55). The Harlequin. Assam—Burma. N & R

G.6. Laxita.—The Red Harlequin.

♂ above dark brown, outer $\frac{1}{3}$ F and apex H red; upf large white patch mid dorsum. ♀ upf outer $\frac{1}{2}$ rosy red. Below rosy red with irregular metallic blue and black markings; bases yellow; apex F yellowish in ♂, rosy in ♀. *telesia bouleteri*, *Fruh.* (45-48). The Red harlequin. Mergui. VR.

G.7. Stiboges.—The Columbine. (Plate 26).

Above transparent white, with white spotted dark brown border.

Apex F pointed in ♂, very rounded in ♀.

**nymphidia*, *But.* (35-45). The Columbine. Bhutan—Burma. VR.

H. Lycænidæ.—The Blues. Key to genera.

1a (5a). H v8 abnormally short = $\frac{1}{2}$ length of v1 F and only extends half way along v7 H; traces of pcv present. Antennæ club gradual, cylindrical. Eyes and Palpi smooth. F vs 5 and 6 close and 7 and 6 from a point. H tornus rounded, no lobe or tail; termen may be produced at v4.

Poritiinæ. The Gems.

1 (2a). F vs 8 and 9 absent; 11 and 12 touch. ♂ uph tuft over brand in cell against sev just before middle and a 2nd tuft near base.

Cyaniroides, *DeN.* The Emerald.

2a (1). F v8 or both 8 and 9 present; 11 and 12 anastomosed.

2b (4). F v9 absent.

2 (3). ♂ uph brand above v7 covered by an erectile tuft of yellow hairs also a recumbent tuft of black hairs along the dorsum from near the base.

Poritia, *M.* The Gems (Plate 26.)

3 (2). ♂ uph 1st brand and tuft as in last; a small obscure brand at end cell uph above origin v4, overlying which there is an insignificant tuft of recumbent dark hairs.

Simiskina, *Dist.* The Brilliants. (Plate 26).

4 (2b). F v9 present. No brand or tuft in the Indian form.

Deramas, *Dist.* The Bluejohn. (Plate 26).

5a (1a). H v8 normal, nearly or quite equal to v1 F; no signs of pcv.

5b (8a). Legs abnormal. Antennæ club gradual and cylindrical. Eyes smooth; palpi smooth and very long, 3rd joint as long as 2nd. F vs 11 and 12 separate; 7 and 6 forked; 5 mid 4-6; 9 present and 8 absent. H tornus rounded, no tail or lobe; termen may be produced at v4.

Gerydinæ. The Brownies.

5c (7). Legs very long, tarsi abnormal.

5 (6). Legs, 1st joint of tarsi elongated, compressed and flattened. ♂ upf v4 thickened at base (except one species); sub-anal abdominal tufts and clasps of ♂ very long and thin.

Gerydus, *Bdv.* The Brownies. (Plate 26).

6 (5). Legs, 1st joint of tarsi elongated, but cylindrical.

Allotinus, *Fd.* The Darkies. (Plate 26).

7 (5c). Legs short, tarsi normal, but tibiæ outwardly incrassate.

Logania, *Dist.* The Mottles. (Plate 26).

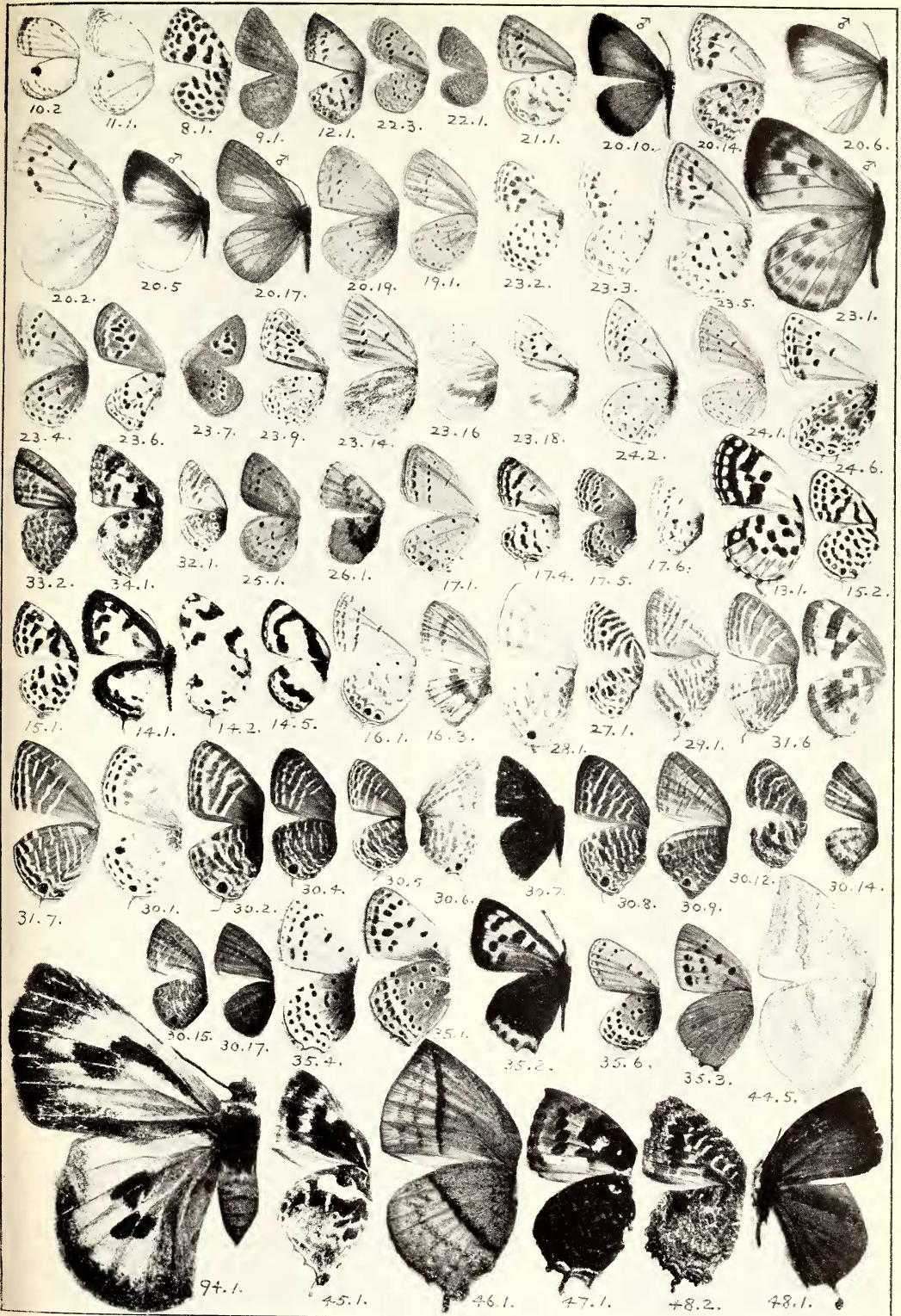
8a (5b). Legs normal (except No. 8).

8b (37a). Antennæ club flattened and spatulate or hollowed beneath (except Nos 8 and 9). F v5 mid 4-6; 8 absent, 9 present. H rounded or produced with or without a short filamentous tail at v2.

NOTES.—The arrangement of the *Erycinidæ* is much as usual; many authors call them the *Nemeobidæ* or the *Riodinidæ*.

The only new name is *Abisara chela kalawna* (G. 4, 3) for a very distinct race that I found flying at Kalaw in February.

The following are new to the Indian Empire; *Abisara savitri* (G4.4) and *Laxita telesia bouleteri* (G. 6), both caught by Mr. Cooper in the cold weather of 1921-22.



H. *Lycaenidae*. H. 8-35. *Lycaeninae*: H. 44. *Curetis*: H. 45-48. *Amblypodia* Group: H. 94. *Liphyra*.

H. Lycænidae—(contd.)*Lycæninae*. The Weak Blues.

8c (10a). Antennæ club gradual, cylindrical and not hollowed beneath. Eyes and palpi smooth. F vs 11 and 12 wide apart; 7 from well before 6. H rounded, tailless.

8 (9). Forelegs with tibiæ thickened. F v9 from mid 7.

Taraka, Doh. The Forest Pierrot. (Plate 27).

9 (8). Legs normal. F v9 from before mid 7. Apex F pointed in ♂.

Spalgis, M. The Apefly. (Plate 27).

10a (8c). Antennæ normal for group see 8b.

10b (35a). F origin v10 nearer origin v11 or mid 11-7.

10c (24a). Eyes smooth, tornus evenly rounded, never produced.

10d (18a). Palpi smooth (except one species of No 17).

10e (12a). F costa highly and evenly arched throughout; vs 6 and 7 separate. H tailless.

10 (11). F vs 11 and 12 anastomosed.

Pithecopis, Hors. The Forest Quakers. (Plate 27).

11 (10). F vs 11 and 12 wide apart and parallel.

Neopithecopis, Dist. The Quaker (Plate 27).

12a (10c). F costa straight or only slightly arched, more prominently so at the base than elsewhere.

12b (14a). f vs 6 and 7 approximate at their origins.

12 (13). F vs 11 and 12 free, though close. Tailed or tailless.

Megisba, M. The Malayan. (Plate 27).

13 (12). F vs 11 and 12 anastomosed. Tailed.

Talicada, M. The Red Pierrot. (Plate 27).

14a (12b). F vs 6 and 7 wide apart at their origins.

14b (17). F vs 11 and 12 free, though often close and even touching.

14c (16). Below with prominent basal markings.

14 (15). F end v11 well beyond end cell.

Castalius, Hub. The Pierrots. (Plate 27).

15 (14). F end v11 opposite end cell.

Tarucus, M. The Blue Pierrots. (Plate 27).

16 (14c). Below markings normal, *Lycæna*-like, no basal markings.

Euchrysops, But. The Plains Cupids. (Plate 27).

17 (14b). F vs 11 and 12 anastomosed. Mostly tailed.

Everes, Hub. The Tailed Cupids. (Plate 27).

18a (10d). Palpi hairy (faintly so in some species of *Chilades* and *Zizera*, while individuals and those from certain localities have them quite smooth).

18b (20a). F vs 11 and 12 anastomosed. Tailless.

18 (19). Habitat palaeartic.

Cupido, Schrank. The Cupids.

19 (18). Habitat N. E. India.

Bothrinia, Chapman. The Hedge Cupid. (Plate 27).

20a (18b). F vs 11 and 12 not anastomosed, but usually more or less bowed towards one another and frequently touching in No. 22. Tailless.

20 (21-23). Fly high along hedges and bushes. Habitat palaeartic and Indo-Malayan.

Lycænopsis, Fd. The Hedgeblues. (Plate 27).

21 (20, 22, 23). Fly high on lime bushes. Habitat Indo-Malayan.

Chilades, M. The Limeblue. (Plate 27).

22 (20, 21, 23). Fly slow and low on grass.

Zizera, M. The Grassblues. (Plate 27).

23 (20-22). Fly fast and low over meadows and in the open.

Lycæna, F. The Trueblues. (Plate 27).

24a (10c). Eyes hairy.

24b (31b). Palpi hairy

H. Lycænidæ—(con. d.)

- 24c (27a). Tailless (also some species of No. 30). F vs 6 and 7 separate.
 24 (25a). F vs 11 and 12 well separated. Very like *Lycæna*.
Polyommatus, Lat. The Meadowblues. (Plate 27)
 25a (24). F vs 11 and 12 anastomosed.
 25 (26). H costa rounded.
Una, DeN. The Una. (Plate. 27).
 26 (25). H costa straight and apex sharp pointed.
Orthomiella, DeN. The straightwing Blue. (Plate 27)
 27 a (24c). Tailed (except some species of No. 30).
 27b (30). F vs 11 and 12 free, though close.
 27 (28a). H rounded. F vs 6 and 7 separate.
Syntarucus, Bul. The Zebra Blue. (Plate 27).
 28a (27). H produced.
 28 (29). F vs 6 and 7 separate.
Catachrysops, Bdv. The Forget-me-not. (Plate 27).
 29 (28). F vs 6 and 7 close together at origins.
Lampides, Hub. The Peablue. (Plate 27).
 30 (27b). F vs 11 and 12 anastomosed; 6 and 7 separate.
Nacadaba, M. The Lineblues. (Plate 27).
 31a (24b). Palpi smooth. F vs 6 and 7 separate.
 31 (32. 33a). F vs 11 & 12 well separated, but joined by a short spur. Tailed.
Jamides, M. The Ceruleans. (Plate 27).
 32 (31. 33a). H vs 11 and 12 anastomosed. H produced; tailless.
Azanus, M. The Babul Blues. (Plate 27).
 33a (31. 32). F vs 11 and 12 free and separate.
 33 (34). H with cilia prolonged into short, very fine tails at vs 1, 2 and 3.
Lycænesthes, M. The Ciliate Blues. (Plate 27).
 34 (33). H produced, but tailless.
Niphanda, M. The Pointed Pierrot. (Plate 27).
 35a (10b). F origin v10 much nearer 7 than 11; 7 and 6 from a point :
 11 & 12 free. Eyes smooth. Palpi hairy. Tailed or tailless.
 35 (36). F v12 ends before end cell.
Heodes, Dalman. The Coppers. (Plate 27).
 36 (35). F v12 ends after end cell.
Heliophorus, Geyer. The Sapphires. (Plate. 26).
 37a (8b). Antennæ club gradual and cylindric (except No. 81).
 37b (94). Body normal, slender, comparatively robust. Usually tailed and lobed, the tail being wider than in the *Lycæminæ*. F v8 usually absent and v9 usually present.
Theclinae. The Strong Blues.
 37c (44a). Palpi hairy and H with a more or less well developed lobe at tornus and usually with a tail. F vs 11 and 12 free; 5 and 6 separate.
Thecla Group. The Hairstreaks.
 37d (40a). F vs 8 and 9 absent.
 37e (39). No tail.
 37 (38). No lobe. No brand.
Neolycaena, DeN. The Persian Hairstreak.
 38 (37). H lobed. ♂ upf an oval brand at upper end of cell, which distorts v7 at its base, causing it to rise well before the end of the cell; in ♀ vs. 6 and 7 from a point.
Callophrys, Billberg. The Tailless Hairstreaks.
 39 (37e). Tailed. ♂ brand and venation as in last.
Strymon, Hub. The White-line Hairstreaks. (Plate 26).
 40a (37d). F v9 present, v8 absent. Nearly always a tail at v2.
 40b (43). F v7 ex. 6.

H. Lycanidæ—(contd.)

40 (41a). H costa straight ; F termen angled in middle ; H lobed, tail-less. ♂ uph brand base v7 and unlf a tuft of hairs mid dorsum.

Listeria, DeN. Lister's Hairstreak. (Plate 26).

41a (40). H costa and F termen evenly convex. ♂ no brand.

41 (42). F v9 from half way along v7. H v3 from end cell. Tailed.

Euaspa, M. The Water Hairstreak. (Plate 26).

42 (41). F v9 from much nearer base v7 ; H v3 from before end cell. All except one species tailed.

Thecla, F. The Hairstreaks. (Plate 26).

43 (40b). F vs 7 and 6 from a point. Tailed.

43a (43b). H tailed at v2 and costa rounded.

Chatoprocta, DeN. The Walnut Blue. (Plate 26).

43b (43a). H not tailed, produced and lobed at v1, above which dorsum is concave. Costa straight, apex right angled and termen concave below apex.

Amblyopala, Leech. The Chinese Hairstreak.

44a (37c). Palpi smooth (except No. 80).

44 (45a). F v7 ends on termen in ♂ and ♀ ; 5 and 6 wide apart ; 11 and 12 separate ; 7 and 6 separate ; H no lobe or tail, but wings may be highly angled. Eyes hairy.

Curetis Group. *Curetis*, Hub. The Sunbeams. (Plate 27).

45a (44). F v7 ends on termen in 1st 2 genera only, but 5 and 6 are in those cases approximate.

45b (81a). Eyes smooth.

45c (50a). F vs 5 and 6 approximate ; 11 and 12 separate ; 7 and 6 separate. Tail never very long.

Amblypodia Group. The Oakblues.

45d (48a) H with a lobe and a tail at v1.

45 (46a). ♂ ♀ F vs 5 and 6 from a point. ♂ F vs 8 and 9 present and v7 ends on termen. ♀ v8 absent and v 7 ends on costa.

Iraota, M. The Silverstreak Blues. (Plate 27).

46a (45). ♂ ♀ F vs 5 and 6 approximate, but not from a point.

46 (47). H tailed only at v1. ♂ F v8 present, absent in ♀ ; ♂ ♀ v7 ends on termen.

Horsfieldia, Riley. The Leafblues. (Plate 27).

47 (46). H tailed at vs 1, 2 and 3, tail at 2 longest. F vs normal, 8 absent and seven ends on costa.

Thaduka, M. The Many-tailed Oakblue. (Plate 27).

48a (45d). H no tail at v1 ; usually lobe at tornus and a tail at v2. F venation normal as in last.

48 (49). H costa concave, apex pointed and more or less hooked. Tail spatulate.

Mahathala, M. The Falcate Oakblues. (Plate 27).

49 (48). H costa usually arched ; tail, if present, not spatulate.

Amblypodia, Hors. The Oakblues. (Plate 28).

50a (45c). F vs 5 and 6 well separated (except some species of No. 59).

50b (56a). H no tail at v1 ; always lobed and with a tail or tooth almost invariably at v2, sometimes at v3 and even at v4.

50c (53a). H not produced at v2 or tornus ; tail comparatively short. F vs 7 and 6 separate, 8 absent and 9 present.

Surendra Group. The Acacia Blues.

50d (52). H no tail at v4.

50 (51). H costa convex ; tail at v2 comparatively short (may be absent) and at v3, if present, very short.

Surendra, M. The Acacia Blue. (Plate 29).

51 (50). H costa straight, apex pointed. H lobe very large, tail at v2 moderately long and tail at v3 nearly as long.

H. Lycenidæ.—(contd.)

- Mota, DeN.* The Saffron. (Plate 29).
 52 (50d) H slender tails at vs 2, 3 and 4, tail at 2 longest.
Semanga, Dist. The Rededge. (Plate 29).
 53a (50c). H produced at v2 and tail long, no tail at v3. F 7 and 6 close, 8 absent.
Loxura Group. The Yamflies.
 53b (55). H dorsum excavated before lobe, which is pronounced. Tail very long.
 53 (54). F v9 present. No ♂ brand.
Loxura, Hors. The Yamfly. (Plate 29).
 54 (53). F v9 absent. ♂ uph a brand along v1.
Yasoda, Dob. The Branded Yamfly. (Plate 29).
 55 (53b). H dorsum not excavated and lobe obsolete.
Drina, DeN. The Yams. (Plate 29).
 56a (50b). H always tailed at v1 as well as at v2 and sometimes at v3 also.
 56b (58a). F vs 6 and 7 forked or from a point.
Spindasis Group. The Silverlines.
 56 (57). F v1 absent, 9 present. H 2 nearly equal tails at vs 1 and 2.
Spindasis, Wallen. The Silverlines. (Plate 29).
 57 (56). F vs 8 and 9 present in ♂, v8 absent in ♀. H 2 equal tails at vs 1 and 2 in ♂, an additional short tail at v3 in ♀.
Zesius, Hub. The Redspot. (Plate 29).
 58a (56b). F vs 7 and 6 separate at origins.
 58b (64a. 79a). H nearly equal tails at vs 1 and 2, under $\frac{1}{2}$ inch.
Tajuria Group. The Royals.
 58c (61a). ♂ uph always with a brand about base v7.
 58 (59a). ♂ upf with a brand on v1 and an overlying tuft of white hairs.
 F v9 present and in one species v8 as well.
Dacalana, M. The Tufted Royal. (Plate 29).
 59a (58). ♂ upf no brand or tuft. F v9 present, 8 absent.
 59 (60). ♂ unf with a tuft mid dorsum.
Pratapa, M. The Tufted Royals. (Plate 29).
 60 (59). ♂ unf no tuft mid dorsum.
Maneca, DeN. The Slate Royal.
 61a (58c). ♂ uph no brand and unf no tuft.
 61 (62a). ♂ F vs 8 and 9 absent. In one species ♂ has a brand upf about end cell, which disappears on the application of benzine.
Britomartis, DeN. The Baby Royals.
 62a (61). F v8 absent, 9 present.
 62 (63). ♂ upf a black brand in cell at end, which does not disappear on the application of benzine.
Creusa, DeN. The Black branded Royal.
 63 (62). ♂ upf normally no brand, if so, of modified scales at end cell, which disappears on the application of benzine.
Tajuria, M. The Royals. (Plate 29).
 64a (58b. 79a). H 2 unequal tails at vs 1 and 2, a tooth or very short tail at v3 and rarely a tooth at v4.
 64b (71a). H tail at v1 longer than the tail at v2; F v9 present.
Jacoona Group. The Imperials.
 64c (69a). F v9 long, its origin well before end v 10.
 64d (66a). ♂ no secondary sexual characters.
 64 (65). F vs 11 and 12 separate. H v7 from well before 6. Tail at v1 12 mm. at v2 6mm.
Charana, M. The Mandarin Blues. (Plate 29).
 65 (64). F vs 11 and 12 anastomosed in ♂, well separated in ♀. Hv7 from just before 6. Tail at v1 17 mm. in ♂, 28 in ♀: at v2 2mm. in ♂ 9 in ♀.

H. Lycaenidae.—(contd.)

Jacoona, Dist. The Great Imperial.

66a (64d). ♂ with secondary sexual characters. F vs 11 and 12 well separated.

66b (68). ♂ ♀ F v8 absent. H vs 3 and 4 from a point; 7 from well before 6.

66 (67). F v9 from nearer 10 than end cell. ♂ uph large oval black brand about origin v7, covered by a thick tuft of black hairs; unf corresponding nacreous area above mid dorsum, which is bowed. Tail at v1 10mm. at v2 4mm.

Manto, Den. The Green Imperial.

67 (66). F v7 from just before end cell. ♂ uph small inconspicuous brand base 6 in the middle of a large nacreous area; unf a tuft of white tipped brown hairs mid dorsum over a nacreous area; dorsum F bowed. Tail at v1 8-10 mm. at v2 3-5 mm.

Mantoides, Druce. The Brush Imperial.

68 (66b). F v8 present in ♂, absent in ♀. H v3 from just before end cell and 7 from just before 6. ♂ uph prominent circular black brand base 7 in middle of a nacreous area; unf a tuft of white hairs mid dorsum over a nacreous area; dorsum bowed. Tail at v1 12mm. in ♂, 20mm. in ♀: at v2 4-7mm.

Neocheritra, Dist. The Grand Imperials. (Plate 29).

69a (64c). F v9 short, its origin after end v10; 8 absent; 11 and 12 close. No secondary sexual characters. Tail at v2=4mm.

69 (70). Tail at v1=8mm.

Purlisa, Dist. The Giant Imperial.

70 (69). Tail at v1=12mm.

Suasa, DeN. The Red Imperial. (Plate 29).

71a (64b). H tail at v2 longer than tail at v1. F v8 absent.

Marmessus Group

71b (76a). F v9 present.

71c (74a). F v9 comparatively long, origin well before end v10. Tail at v2 very long.

71 (72a). F origin v9 nearer to base v7 than to its apex. F apex truncate and termen angled in middle. Tail at v1 4mm. at v2 13mm.

Cheritrella, DeN. The Truncate Imperial. (Plate 29).

72a (71). F origin v9 nearer to apex than to base v7.

72 (73). F origin 5 nearer to 6 than to 4. Tail at v1 6mm. at v2 25mm.

Neomyrina, Dist. The White Imperial. (Plate 29).

73 (72). F origin 5 mid 6-4. ♂ uph small pale brand base 7, covered by a thin tuft. Tail at v1 5mm. at v2 22mm.

Cheritra, M. The Common Imperial. (Plate 29).

74a (71c). F v9 short, origin after end v10.

74 (75). F v12 ends before end cell. Tail at v1 5mm. v2 18mm. ♀ v3 1½mm.

Ticherra, DeN. The Blue Imperial.

75 (74). F v12 ends after end cell. Tail at v2 under ½ inch. ♂ with brand in one species.

Biduanda, Dist. The Posies. (Plate 29).

76a (71b). F v9 absent (rarely present in ♀ of No. 76).

76b (78). H angled and tailed at v3.

76 (77). H not angled at v4. ♂ uph large oval speckled brand about origin v7 with a white area below and a nacreous area above; unf corresponding white patch and nacreous area, dorsum much bowed. Tail under ½ inch.

Marmessus, Hub. The Common Posy. (Plate 29).

77 (76). H angled at v4. ♂ upf a circular brand bases 2 and 3, which disappears with benzine. Tail over ½ inch.

Eoxylides, DeN. The Branded Imperial.

H. Lycænidæ.—(contd.)

78 (76b). H in ♂ not angled or tailed at v1 and tail at v2 short; in ♀ angled at v1, but not tailed, tail at v2 long, but under $\frac{1}{2}$ inch.

Thamala, M. The Cardinal. (Plate 29).

79a (58b, 64a). H with 3 more or less equal slender tails at vs 1, 2 and 3. F vs 8 and 9 absent.

Horaga Group. The Onyxes.

79 (80). H sharply right angled and produced at v4.

Rathinda, M. The Monkeypuzzle. (Plate 29).

80 (79). H termen at most faintly angled at v4. ♂ unf a brand in two species.

Horaga, M. The Onyxes. (Plate 29).

81a (45b). Eyes hairy.

81 (82a). Palpi hairy. H with 3 slender tails at vs 1, 2 and 3, that at 2 longest. F vs 8 and 9 absent; 7 and 6 from a point; 11 and 12 separate; 5 and 6 separate.

Catapocilma Group. *Catapocilma, But.* The Tinsels. (Plate 29).

82a (81). Palpismooth.

82b (85a). H with a tail at v1 as well as at v2, that at 1 longest, lobed. F vs 8 and 9 absent 7, and 6 separate, also 5 and 6.

Hypolycaena Group. The Tits.

82 (83a). Antennæ club flattened and somewhat spatulate. F vs 11 and 12 close.

Chliaria, M. The Blue Tits. (Plate 29).

83a (82). Antennæ cylindrical as usual.

83 (84). H apex evenly rounded, end v7 mid 8-6. ♂ one species with a brand on disc upf.

Hypolycaena, Fd. The Tits. (Plate 29).

84 (83). H apex sharp, v8 short and end v7 much nearer end v6, termen quite straight from apex to v3. Tails long and fluffy.

Zeltus, DeN. The Fluffy Tits. (Plate 29).

85a (82b). H no tail at v1, though lobe, which is more prominent than in the other groups as a rule, may be pendulous and look like a tail. F v8 absent.

Artipe Group. The Flashes.

85b (93). F v9 present.

85c (89a). F v9 comparatively long, about half as long as v7 and arises well before end v10 from about half way along v7.

85d (87a). No secondary sexual characters.

85 (86). ♂ with slender tail, ♀ with a very long fluffy white tail.

Artipe, Bdv. The Green Flash. (Plate 29).

86 (85). ♂ ♀ with slender tail at v2.

Deudoryx, Hew. The Cornelians. (Plate 29).

87a (85d). ♂ uph with a brand about base v7 and usually unf with a tuft mid dorsum.

87 (88). F vs 7 and 6 from a point, 5 nearer 6 and lower dcv concave; 11 and 12 parallel, separate. ♂ unf tuft always present.

Virachola, M. The Guava Blues. (Plate 29).

88 (87). F vs 6 and 7 separate, 5 mid 4-6, lower dcv straight; 11 and 12 close. ♂ tuft missing in two species and individuals of another.

Rapala, M. The Flashes. (Plate 29).

89a (85c). F v9 short, about $\frac{1}{4}$ length of v7 or less, arising beyond mid 7 and at or after end v10.

90 (91a). H lobe small. F vs 11 and 12 close, ♂ uph prominent brand about base v7 and unf either a tuft or a brand.

Sinthusa, M. The Sparks. (Plate 29).

91a (90) H lobe elongate and pendulous.

H. Lycænidae.—(contd.)

91 (92). H produced and tail very long, over $\frac{1}{2}$ inch. ♂ uph brand about base v7 and unf a tuft mid dorsum.

Bindahara, M. The Planes. (Plate 29).

92 (91). H tail well under $\frac{1}{2}$ inch. ♂ no brand.

Araotes, Doh. The Witch. (Plate 29).

93 (85b). F v9 absent; 11 and 12 touch. ♂ uph a tuft of black hairs mid cell and an obscure brand about origin v7; unf tuft black hairs mid dorsum over a polished area. H tail under $\frac{1}{2}$ inch, lobe elongated and pendulous.

Sithon, Hub. The Plush. (Plate 29).

94 (37b). Highly abnormal and more like a moth. Large, body very stout, as wide as cell. F vs 11 and 12 separate; 7 ends on termen. 7 and 6 forked, 8 and 9 present, 5 and 6 separate. H lobed, tailless. Eyes smooth. Palpi smooth and unusually small.

Liphyrina, Liphya, Wd. The Moth Butterfly (Plate 27).

H. 1. Cyaniroides.—The Emerald.

Above ♂ shining emerald green, broad dark brown borders; ♀ pale greyish blue with very broad dark brown borders and base H. Below white with numerous fine zigzag lines.

libna andersoni, M. (28-32). The Emerald. Kisseraing Is, Mergui (Moore). VR.

H. 2. Poritia.—The Gems. (Plate 26).

♂ above brilliant blue or green with a broad black apex and costa F and H: the apex F is more or less blue spotted; there may or not be a more or less well developed black spot in the middle of 1 upf. Below with numerous catenulated bands. ♂♂ are very variable and it is difficult to distinguish between the species.

1a (3a). Below the catenulated bands are evenly distributed; unf across 2 and 3 there are 2 bands internal to the discal band.

1 (2). ♂ upf blue colour confined to 1 and 2, apex and cell unmarked black uph blue colour up to v5 and mid cell. ♀ extensively violet blue; upf with only a narrow black bar at end cell; more or less prominent submarginal blue spots, between which the veins are obscurely broad reddish. Below grey, bands cinnamon.

sumatrae, Fd. (26-38). The Sumatran Gem. Mergui. VR.

2 (1). ♂ upf blue colour to v4; marginal and apical spots large and prominent and with a basal blue streak along upper edge of cell; uph blue colour not above v4 or in cell. Below very dark plumbeous, much darker than any other species of the genus; bands close and very dark cinnamon. ♀ brown; upf an obscure orange discal spot; below paler.

philota, Hew. (29). The Malay Gem. Mergui. VR.

3a (1a). Below catenulated bands wider apart on disc, especially beyond the cell; unf only one band across 2 and 3 internal to the discal band; ground colour white or grey. ♂ upf blue colour nearly always reaches to v4.

NOTE.—The general arrangement is much as usual and is a mean more or less between the various authorities. I have put the *Poritiinae* at the beginning as being nearest to the *Erycinidae*. The genera *Lycæna*, *Lycænopsis* and *Zizera* have been split up into a number of genera based on the genitalia; I do not know whether such genera will stand, but I personally hope not. *Selira* is very closely allied to *nissa*, *Koll*, which is a true *Rapala* and I have therefore sunk the genus *Hysudra* to *Rapala* (H. 87). I have not seen a ♂ of *virgo*, *DeN.*, the type of *Pseudochliaria*, *Tyt.*, and it may perhaps be worth retaining it as distinct from *Sinhusa* (H. 89). *Ops*, *DeN.*, *Creon*, *DeN.*; and *Bullis*, *DeN.*, do not seem to be worth keeping separate from *Tajuria*, *Pratapa* and *Britomartis* respectively (H. 63, 59 and 61), nor does *Zinaspa* from *Surenda* (H. 50). *Dacalana* should probably be united to *Pratapa*.

H. 2. Poritia.—(contd.)

3b (6a). ♀ uph more or less violet blue no yellow.

3c (5). ♀ upf no yellow whatsoever, broadly violet blue.

3 (4). ♀ uph cell and basal half of 4 black; upf cell black with a blue spot in the middle, 2 apical and 1 or 2 submarginal spots. ♂ upf cell mostly blue, but there is a black streak above the mv nearly to the base; apex and margin usually not spotted, but there may be traces of spots; uph except near margin blue colour does not enter 4, nor into cell except more or less patchily. Below very white, much whiter than any other species except the ♀ of No. 7; catenulated bands pale, with only a faint cinnamon tinge.

dawna, Evans. (25-35). The Dawna Gem. Dawnas—S. Burma. VR.

4 (3). ♂ ♀ uph cell and to v4 black; upf cell blue. Below grey, bands very prominently cinnamon.

a. ♂ ♀ upf always with apical and 2 or 3 submarginal spots (may be absent in DSF).

**pleurata geta*, Fav. (30-40). The Green Gem. Manipur—Dawns. NR.

β. ♂ apical and submarginal spots absent; ♀ submarginal spots present, but apical may be present or absent.

pleurata regia, Evans. (30-38). Tavoy—S. Burma. NR.

5 (3c). ♀ upf always a yellow discal patch in 4; cell black; uph black with a more less developed violet blue band on disc. ♂ upf cell usually all black, but there may be traces of blue scales at the base and in the middle.

a. ♂ ♀ apical and submarginal spots usually present. ♂ uph cell and all 4 black.

hewitsoni hewitsoni, M. (31-38). The Common Gem. Kumaon—Assam. NR.

β. ♂ ♀ upf apical and submarginal spots usually absent. ♂ uph cell and 4 may be blue with a narrow black bar end cell.

hewitsoni tavoyana, Doh. (30-36). Burma. NR.

6a (3b). ♀ uph more or less yellow.

6 (7). ♀ above entirely yellow except for a dark brown costa and termen upf and some diffuse marginal spots uph. ♂ upf cell black and the blue colour only just enters 3; submarginal spots obscure, apical absent; uph cell black and space 4 blue except at base. Below white with very prominent ferruginous bands and prominent ferruginous patches at apex F and H, making the underside very distinctive.

karennia, Evans. (34-36). The Karen Gem. Karens. R.

7 (6). ♀ above with yellow discal patches only, which are of variable extent, on H consisting of at most a narrow band. ♂ very variable, but always much bluer than any of the preceding species; upf basal half entirely blue, apical, and, submarginal spots usually well developed and the apical may be joined to the blue discal area; uph blue colour never enters cell nor into 4 except sometimes at the margin.

a. ♀ as ♀ of No. 5 but yellow spots uph.

erycinoides elsiei, Evans (26-36). The Blue Gem. Assam—N. Shan States. NR.

β. ♀ above no violet.

**erycinoides phraatica*, Hew. (26-36). S. Shan States—S. Burma. NR.

H. 3. Simiskina.—The Brilliants. (Plate 26).

♂ above black with brilliant blue or green markings; upf a basal streak below the mv, costal spots beyond and a complete curved submarginal row, also conjoined spots mid dorsum; uph basal streak below mv, discal and marginal spots. Below no catenulated bands. Termen in ♀ sharply angled and produced at v4. ♂ ♀ very alike above, but ♀ ♀ very distinct.

1a (3a). Unf with a white central band. ♀ above dark brown.

1 (2). Unf the central white band broad and increasing to dorsum markedly, continued on H through end cell. ♀ upf a prominent circular white discal spot. Below dark ferruginous brown.

H. 3. Simiskina.—(contd.)

**phalena harterti*, Doh. (28-34). The Broad-banded Brilliant. Assam—S. Burma. VR.

2 (1). ♀ unf the central white band narrow, not increasing to dorsum and continued narrowly on H well beyond end cell. Below bright ferruginous, no dark bar end cell unf; a rather obscure whitish submarginal band, irregular on H. Above plain brown. (Hewitson's type is tinted dull blue above and on uph has a pale blue line from the dorsum to v4 along the margin; these are inconstant characters in other species). ♂ unknown.

pediada, Hew. (30). The narrow-banded Brilliant. Mergui. VR.

3a (1a). Below no white band.

3 (4a). Unh ♂ ♀ prominent sharply defined blue line along the termen from tornus to v4. ♀ above plain dark brown with traces uph of a blue marginal line. Below plain, rather pale brown, no ferruginous tinge, pale bordered dark line end cell, similar discal and submarginal lines, former being very irregular on H. ♀ only slightly angled at v4.

pharyge, Hew. (32-35). The Blueline Brilliant. Mergui. VR.

4a (3). Unh no blue submarginal line. Below always with more or less of a ferruginous tinge.

4 (5). ♀ above plain dark brown. ♂ below dark purple brown with a shining gloss, lines as in last; outer half H beyond cell prominently paler; unf submarginal line parallel to margin. ♀ below pale brown with a faint purple gloss. ♂ above markings greener than usual.

**pasira dohertyi*, Evans. (28-35). The Green Brilliant. Tavoy—S. Burma. R.

5 (4). ♀ above orange yellow; upf apex and termen dark brown, sometimes with dark brown shading of varying width and intensity along dorsum and a thin line end cell; uph all orange yellow, sometimes more or less suffused dark brown scales and with diffuse submarginal spots. ♂ above bluer than the last. Below marked as the last; ♂ unf apex and upper part of termen prominently paler and the submarginal line curved in at the upper end. ♀ ochreous below with a strong purple wash.

**phalia*, Hew. (35-40). The Blue Brilliant. Dawnas—S. Burma. R.

H. 4. Deramas.—The Bluejohn. (Plate 26).

♂ above black, lower part F and H shining blue, divided on F by a black streak in 1 and uph bearing diffused dark submarginal spots. ♀ purple instead of blue, more extensive on F and not divided by a black streak. Below purple brown (to ochreous in ♀) with dark discal and submarginal line and some dark spots at tornus H. H margin even in ♂ slightly angled at v4 in ♀.

**livens jasoda*, DeN. (33-36). The Bluejohn. Karens—S. Burma. R.

H. 5. Gerydus.—The Brownies. (Plate 26).

Above dark brown with a more or less prominent curved white or pale yellow discal band upf from mid costa to tornus, portion in 1 and 2 consisting of more or less detached spots. Below brown with more or less obscure spots on H. Body in ♂ very long, projecting well beyond the wings.

1 (2a). ♂ v4 F thickened at base. Upf discal band very variable, straight or angled, spot in 1 may be absent and sometimes spot in 2 in ♂.

**croton*, Doh. (28-42). The Plain Brownie. Bhamo—S. Burma. NR.

2a (1). ♂ v4 F not thickened at base.

2b (5a). Upf the upper edge of the discal band even.

2c (4). Upf the lower edge of the discal band irregular; if extended to base, there is always a dark area about origins vs 2 and 3.

2 (3). Apex upf not conspicuously darker than the rest of the wing; discal band as in last, but in ♂ may be reduced to a small whitish patch base 4.

**boisduwali assamensis*, Doh. (32-38). The Common Brownie. Sikkim—Burma. C.

H. 5. Gerydus.—(*om'd.*)

3 (2). Apex F conspicuously darker than the rest of the wing, which is much paler brown; discal band more prominent and in DSF may extend to the base, the whole of the upperside being white except for the apex F, costa H and a discal brown patch F.

longeana, DeN. (30-38). Long's Brownie. Manipur—Burma. NR.

4 (2c). Upf discal band broad and white—at least $\frac{1}{4}$ wing and even edged on both sides.

biggsii, Dist. (32-38). Bigg's Brownie. Burma. R.

5a (2b). Upf discal band broad and upper edge sharply angled in at v_3 .

5 (6). Upf discal band not divided and often extended to base; ♂ ♀ uph with a pale discal streak.

symethus diopeithes, Fruh. (40-50). The Great Brownie. Nagas—Burma. VR.

6 (5). Upf discal band completely divided by a broad brown streak from base 2. ♀ upf and all uph except costa very pale brown.

**ancon*, Doh. (36-48). The Divided Brownie. Burma. NR.

H. 6. Allotinus.—**The Darkies.** (Plate 26).

Above dark brown, sometimes with a pale area upf as in last. Below grey striated or spotted on H as in last. Body of ♂ very long, longer than the wings.

1a (3a). Below broad catenulated markings and small dots as in *Gerydus*. Above marked as *Gerydus*.

1 (2). F apex projected as a fine long tooth and termen crenulate. Below brown with an ante-terminal band. ♂ upf yellowish white curved discal fascia in 2-4. ♀ white except for apex F and costa H.

drumila, M. (48-54). The Crenulate Darkie. Sikkim—Assam. VR.

2 (1). F apex not projecting, termen straight in ♂, crenulate in ♀.

a. ♂ ♀ fascia as in ♂ of No. 1, becoming obscure in ♂.

**multistrigatus multistrigatus*, DeN. (48-54). The Great Darkie. Kumaon—Shan States. VR.

β. Below greyish yellow, no ante-terminal band. Smaller. ♂ as No. 1, but band upf slightly bent forward. ♀ between Nos. 1 and 3.

multistrigatus aphionius, Fruh. (48-54). Karens. VR.

3a (1a). Below striated.

3b (8) Upf pale discal marking, if present, never to base and never bluish.

3c (7). Unh dark brown spot mid costa not more prominent than any other spot.

3d (5a). ♂ upf prominent pale streak about basal half v_4 ; ♀ pale discal area. Unf uniform.

3 (4). ♂ upf pale streak long and comparatively broad. Below much striped.

**horsfieldii continentalis*, Fruh. (38-44). The Common Darkie. Assam—Burma. C.

4 (3). ♂ streak short and comparatively narrow. Below less striped. *posidion atacinus*, Fruh. (34-40). The Lesser Darkie. Burma R.

5a (3d). ♂ ♀ upf discal streak and pale area obsolete.

5 (6). Unf apex prominently light burnt sienna. ♂ F apex produced.

taras, Doh. (34-40). The Brown-tipped Darkie. Burma. R.

6 (5). Unf uniform. ♂ apex not produced. ♀ termen prominently-toothed at v_4 .

fabius panormis, Ell (34-40). The Angled Darkie. Nagas—Karens. VR.

7 (3c). Unh prominent dark brown spot mid costa. ♂ ♀ F and H termen crenulated.

nivalis substrigosa, Fruh. (20-30). The Small Darkie. Karens.—S. Burma. R.

8 (3b). Upf with a blue patch extending to base, narrow in ♂, broad in ♀.

subviolaceus manychus, Fruh. (30-38). The Blue Darkie. Manipur—Burma. R.

H. 7. Logania.—The Mottles. (Plate 26).

Above dark brown with a whitish or pale bluish discal area, which may extend to base and all H. Below closely mottled.

1 (2a). Below dark mottled with on H a very prominent broad white streak from base to termen below apex. Above bluish white with a very broad black apex upf.

sriwa, *Dist.* (28-35). The Striped Mottle. Mergui. VR.

2a (1). Below uniformly mottled, no white streak H.

2b (4.5). Upf apex dark brown with broad bluish white discal area, extending to costa, dorsum and often to base, which may be suffused brown. Uph costa brown, rest blueish white, more or less suffused brown. Below prominently mottled.—2 (3) Unh white mottled dark brown.

**marmorata*, *M.* (20-22). The Pale Mottle. S. Burma. R.

3 (2). Unh ochreous. Termens crenulate.

luca, *DeN.* (23-30). The Yellow Mottle. Rangoon—S. Burma. R.

4 (2b.5). Upf apex brown, prominent bluish white discal patch, which does not extend to base, costa or dorsum, where the brown area is bluish. Uph costa brown, rest bluish, often with discal white patch. Unf broad discal white fascia, rest and unh prominently mottled.

watsoniana, *DeN.* (24-32). Watson's Mottle. Manipur—Burma. VR.

5 (2b.4). Upf brown with a rather small discal bluish white patch, remainder dark brown. Below rather obscurely mottled.

massalia, *Doh.* (20-30). The Dark Mottle. Assam—Burma. VR.

H. 8. Taraka.—The Forest Pierrot. (Plate 27.)

Above ♂ dark brown; upf with more or less of a black spotted white discal patch and uph the black spots from below showing through ♀ white with broad dark costa and termen upf and the dark spots from below showing through faintly.

Below white with numerous large black spots, including 4 along the costa F.

**hamada mendesia*, *Fruh.* (20-30). The Forest Pierrot. Sikkim—Burma. NR.

H. 9. Spalgis.—The Apefly. (Plate 27.)

Above brown with diffused or well defined white patch upf. Below covered with numerous very fine wavy brown lines.

a. Paler. Upf white discal area nearly always present.

**epius epius*, *Wd.* (20-30). The Apefly. Ceylon, S. India—Bengal. Kumaon—Burma. NR.

β. Darker. White area obsolete upf.

epius nubilus, *M.* Andamans, Nicobars.

H. 10. Pithecopis.—The Forest Quaker. (Plate 27.)

Brown or blue above. Below white, with a large prominent black costal spot unh and no basal markings.

1 (2). Above dark shining blue with broad brown border in ♂; ♀ brown. Unh no postdiscal band.

fulgens, *Doh.* (22-28). The Blue Quaker. Assam. R.

2 (1). Above ♂ ♀ brown, paler on disc F. Unh usually with narrow postdiscal band. Unf 2 small prominent costal spots.

**hylax*, *F.* (21-26). The Forest Quaker. Sikkim—Burma. NR.

H. 11. Neopithecopis.—The Quakers. (Plate 27.)

Above brown with more or less of a white discal patch F and H, ranging from almost entirely brown in WSF to almost entirely white in DSF. Below very like *P. hylax*; unh black costal spot is smaller and with a small spot on dorsum, also there may be 3 basal spots and a postdiscal band. Unf no prominent spots on the costa except as part of the postdiscal band.

**zalмора*, *But.* (20-30). The Quaker. Ceylon & India—Bengal. Kumaon—Burma. Andamans. C.

H. 12. Megisba.—The Malayan. (Plate 27.)

Above dark brown with a well defined whitish discal patch nearly always present upf. Below white with spots *Lycaena*-wise, that is with a discal series and on H basal spots; in addition in strongly marked specimens there are 4 small spots on the costa upf as well as a spot in the cell.

a. Tailless.

**malaya thwaitesi*, M. (20-30). The Malayan. Ceylon, S. India—Bengal. NR.

β. Tailed.

malaya sikkima, M. Kumaon—Burma. Andamans. NR.

H. 13. Talicada.—The Red Pierrot. (Plate 27.)

Above black with a broad orange area H. Below white, large discal and marginal black markings F; H with broad orange marginal band bearing white spots. Cilia chequered.

a. Above orange area more extensive, width $\frac{1}{4}$ inch. Unh markings reduced, most of discal band H absent.

nyseus nyseus, Guer. (30-36). The Red Pierrot. Ceylon, S. India. NR.

β. Above orange area restricted, well under $\frac{1}{4}$ inch. Unh markings large and complete.

**nyseus khasiana*, Swin. (30-36). Assam—N. Burma. NR.

γ. Smaller and much darker. Unf outer black border nearly meets discal band; all markings very broad.

nyseus burmana, Evans. (28-34). Shan States. R.

H. 14. Castalius.—The Pierrots. (Plate 27.)

Mostly white above or with a broad white discal band. Below white with very characteristic markings.

1 (2a). Above white with several black spots on the white areas F and H; bases metallic blue, suffused dark scales in ♀, costa H dark brown. Below with several irregularly arranged black spots. Unf basal markings consist of a long basal streak, spot end cell and a spot on 1, all well separated.

**rosimon rosimon* F. (24-32). The Common Pierrot. Ceylon. India. Burma. C.

β. Spots larger.

rosimon alarbus, Fr. Andamans and Nicobars. C.

2a (1). Above a broad white band across both wings, extending to costa on H except rarely in No. 2, the upper end on F angled outwards; costa F and margins dark brown; white band immaculate except on H in No. 5.a.

2b (5). Unf discal band in 3 portions, upper and lower consisting of large spots, central smaller and nearer margin. Unh discal band usually also in 3 parts.

2 (3.4). Unf basal markings consist of a short basal streak and a well detached broadly angled band from costa to dorsum. Unh at base a narrow elbowed band, often macular and not reaching costa. ♂ black above.

a. Above white band narrower in all seasonal forms.

caleta hamatus, M. (26-32). The Angled Pierrot. Ceylon. NR.

β. Above white band wider; markings below smaller and more macular.

**caleta decidia*, Hew. S. India. Sikkim—Burma. NR.

3 (2.4). Unf basal markings consist of 2 parallel and nearly equal inclined streaks. Unh 2 parallel basal streaks, not reaching costa, often coalesced. ♂ cobalt blue above; ♀ dark brown.

a. Above discal band broad. Below markings smaller and well separated. *ethion ethion*, Db. (26-30). The Banded Blue Pierrot. Ceylon, S. India. Asam—Burma. Andamans. NR.

β. Above discal band narrower. Below markings large, discal spots on H coalesced.

H. 14. *Castalius*.—(contd.)

ethion airavati, Doh. Nicobars. R.

4 (2.3). Unf basal markings consist of a single broad, sharply angled band meeting a black area at base H. ♂ black above.

elna noliteia, Fruh. (30-34). The Elbowed Pierrot. Orissa. Sikkim—Burma. Andamans. NR.

5 (2b). Unf discal band either continuous or lower part only separate; basal markings consist of a single broad inclined straight streak from mid costa to dorsum near base, joining a black area at base H. ♂ above black. Unh the 3 parts of the discal band may be conjoined.

a. Above white areas more extensive; in DSF uph black discal spots show up as below owing to the black margin being narrower.

roxus roxana, DeN. (26-30). The Straight Pierrot. Assam—N. Burma. NR.

β. Above white areas narrower. Uph never with detached discal spots.

**roxus roxus*, God. S. Burma. Andamans. NR.

γ. Above white areas much restricted. Unh extreme base costa not white. *roxus manluena*, Fd. Nicobars. R.

H. 15. *Tarucus*.—The Blue Pierrots. (Plate 27.)

Small; blue above. Below white with a prominent dark streak from the base in each wing. Close to *Castalius*, but without the large white areas above.

1 (2a). Unh at most a single obscure metallic spot at the tornus. ♂ above very dark purple blue, with rather narrow dark brown border; ♀ plain brown, rarely with the bases blue. Below markings as in next, but darker, broader and coalescent.

**ananda*, DeN. (22-28). The Dark Blue Pierrot. S. India. Sikkim—Burma. R.

2a (1). Unh with a prominent black spot above the tail, a prominent metallic spot at tornus and 2 or 3 along the termen.

2 (3) ♂ above rather pale violet blue with a narrow brown border; uph always a black spot end cell and sometimes a spot below it and 2 discal spots. ♀ brown with blue bases, discal spots fully developed and whitish patches beyond cell F and along margin H. Below plentifully marked with rusty brown to black streaks on a white ground, varying in size and intensity; unh a spot in the cell and another below it.

**theophrastus nara*, Koll. (22-30). The Rusty Pierrot. Ceylon. India. N. Burma. C.

3 (2) ♂ darker with broad fuscous borders. ♀ dark brown.

venosus, M. (22-33). The Kulu Pierrot. Abbotabad—Kumaon. R.

H. 16. *Euchrysops*.—The Plains Cupids. (Plate 27.)

Blue above with catenulated discal spots on a grey ground below; on unh spots at base, along costa and tornus are black, latter crowned metallic and orange; remaining spots very much paler brown. Unf no spot in cell.

1 (2a). Unh discal band very broken, spots in 1 and 1a completely separate; 2 nearly equal black spots at tornus; no spot in 1 below cell spot. ♂ above violet; uph 2 black spots at tornus and no spot in 1a.

**cnejus*, F. (25-33). The Gram Blue. Ceylon. India. Burma. Nicobars. C.

2a (1). Unh discal band more regular; spots in 1 and 1a with edges conjoined. WSF unh tornal spot in 1a.

2 (3). Unh no spot in 1 under cell spot; spots at tornus subequal, uph single spot at tornus above tail.

a. Much brighter blue and below markings more prominent.

contracta nila, Evans. (20-25). The Small Cupid. Ceylon. NR.

β. Duller above and below.

contracta contracta, But. S. India—Sind, Punjab, N.W.F. Province. NR.

H. 16. Euchrysops.—(contd.)

3 (2). WSF unh a spot in 1 under cell spot; tornal spot in 2 far more prominent than the spot in 1.

a. WSF and DSF very alike. Larger and brighter blue. Uph marginal spot in 2 prominent, but there is a series of dusky spots on either side and a prominent white line beyond them.

pandava lanka, Evans. (30-35). The Plains Cupid. Ceylon. C.

β. WSF and DSF very different. Smaller. Uph only a marginal spot in 2, no marginal white line. DSF below has the discal band much widened and on H is conjoined to the spot end cell, forming a large central dark patch; tornal spots obsolete.

**pandava pandava*, Hors. (25-30). India, Burma, Nicobars. C.

H. 17. Everes.—The Tailed Cupids. (Plate 27.)

Small; usually blue in the ♂. Below grey to white, spots as usual and with more or less prominent orange tornal spots unh.

1a (5a). Unh never a spot in 1 adjacent to the spot mid cell.

1b (4). Unf discal spots in a continuous line. ♂ blue above. Tailed.

1c (3). Below all spots black and equally prominent. Unh discal spot in 6 shifted in, not in line with the spots in 5 and 7. ♂ brown above.

1 (2). Unf discal spots all in line; unh discal spot 2-5 on an even arc. ♂ upf dark border under 2 mm.

a. ♀ uph with orange spots at tornus. ♂ upf border under 1mm.

argiades diporides, Chap. (20-25). The Tailed Cupid. Chitral—N. Burma. C.

β. ♀ uph no orange spots at tornus. Very variable, but in WSF the spots are considerably larger below. ♂ upf border about 1½mm.

**argiades hellotia*, Men. (24-30). Sikkim, Bhutan. C.

2 (1). Unf discal spot in 2 shifted in; unh discal spots in 3-5 in a straight line, spot in 2 shifted in. ♂ above border over 2mm. and often a very prominent spot end cell. ♀ uph no orange spots at tornus. Unh orange spots more extensive and not sharply defined.

dipora, M. (22-26). The Dusky Blue Cupid. Kashmir—N. Burma. NR.

3 (1c) Unh spot mid cell, the 2 costal spots in 7 and the spot in 1a on dorsum black, forming a contrast with the remaining spots, which are grey and hardly darker than the ground. Unf discal spots in line. Unh discal spot in 6 in line with the spots in 5 and 7 or very nearly so.

a. ♂ above border about 2mm. ♀ with discal areas pale dull blue.

parrhasius parrhasius, F. (22-28). The Indian Cupid. Ceylon, S. India. NR.

β. ♂ above variable, usually much darker, with prominent black veins and broader border. ♀ usually uniform black, but Burmese specimens often have the disc blue.

parrhasius assamica, Tyt. Assam.—Burma. NR.

γ. Above as a. ♀ with discal areas above paler, often nearly white. Below discal markings obsolete or nearly so, never so prominent as the marginal markings.

parrhasius pila, Evans. (22-26). Andamans and Nicobars. NR.

4 (1b). Below discal bands much broken, broad and very black; unf a continuous upper band in 3-6 and a similar quite separate lower band in 1-2; unh discal band in 3 parts. Above ♂ ♀ uniform dark brown. Tailed.

**potanini*, Alph. (22-25). The Banded Cupid. N. Burma—Dawnas. R.

5a (1a). Unh with a spot in 1 adjoining the spot mid cell. Above ♂ ♀ dark brown. Below markings more or less normal.

5 (6). Tailed. Unh with prominent orange markings at tornus. Below leaden grey, markings small, prominent, and of uniform size.

**kala*, DeN. (22-25). The Black Cupid. Nagas—S. Shan States. R.

6 (5). Tailless. Unh no orange markings at tornus. Below nearly white, markings H irregular and of unequal size.

**moorei*, Lech. (20-23). Moore's Cupid. Assam. VR.

H. 18. Cupido—The Cupids.

♂ above dull blue, shading to a broad fuscous border; an obscure dark spot end cell F. ♀ plain brown. Below grey, spots minute and marginal spots obsolete; unh discal spot in 6 between spots in 5 and 7, spots 2-5 on an arc, obscure black tornal spots crowned metallic and orange.

sebrus shandura, Evans. (21-25). The Shandur Cupid. Chitral. R.

H. 19. Bothrinia.—The Hedge Cupid. (Plate 27.)

Resembles *Lycaenopsis* very closely. ♂ above dull blue with a black bar end cell F, ♀ border rather narrow, dilated at apex F. Below grey; unfdiscal spots 1-5 in line, spot in 6 only slightly shifted in; unh spots small and regular, discal spot in 1 almost in line with spots in 1a and 2.

**chennellii*, DeN. (22-25). The Hedge Cupid. Assam—Karens. R.

H. 20. Lycænopsis.—The Hedge Blues. (Plate 27.)

♂ blue above, sometimes with white discal areas and a dark border of varying width. Below grey to white; spots as usual, but never any metallic or orange spots and no spot in cell F. Unfd spot in 6 shifted in normally out of line with the rest of the discal spots and unh discal spot in 6 is shifted in out of line with the spots in 5 and 7.

1 (2a). Below white, no basal or cell spots, submarginal spots large and immediately preceded by the discal line. ♂ dark blue, border $\frac{1}{2}$ mm. widening at apex. ♀ dark brown with a well defined white band above.

haraldus ananga, Fruh. (40-42). Felder's Hedge Blue. Victoria Point. VR.

2a (1). Below with basal markings H and spot end cell F and H.

2 (3a). Below white, marginal markings absent; spots on H very minute: discal spots on F very large, spots in 2 and 3 shifted out near the margin, no spot in 6. Above ♂ dusky blue, border 4 mm; ♀ disc F white, H all dusky blue.

**vardhana*, M. (38-44). The Dusky Hedge Blue. Kashmir—Kumaon. NR.

3a (2). Below marginal markings present; unfdiscal spots in 2 and 3 not shifted out and markings on F and H of equal size.

3 (4a). Unfd spot in 6 absent or, if present, in line with rest, spot in 1 shifted in; all markings very small. ♂ above violet blue, border 2mm. Below grey marginal markings complete.

binghami, Chapman. (30). Chapman's Hedge Blue. Assam—N. Burma. VR.

4a (3). Unfd spot in 6 always present and much shifted in (except in DSF forms where all the spots tend to obsolescence).

4b (7a). Below submarginal lunules completely absent, marginal spots present. Unh no spot base 2.

4c (6). Unh discal spot in 4 not markedly different to the other spots. Unfdiscal spots 2-4 in line.

4 (5). Unfd always discal spot in 1, which is shifted in. Below pale grey. Above dark blue, border a thread; ♀ violet blue with broad borders.

lanka, M. (27-32). The Ceylon Hedge Blue. Ceylon. R.

5 (4). Unfd never a discal spot in 1. Below white, markings very small. Above white with broad dark costa and termen F; base and costa leaden blue in ♂ dark brown in ♀.

**akasa mavisa*, Fruh. (26-30). The White Hedge Blue. Ceylon, S. India. NR.

6 (4c). Unh discal spot in 4 oblique and elongated. Below white, usually a spot in 1 unfd. ♂ above pale blue with a large white discal patch F and H. apex broadly dark brown, reducing to a thread at tornus F. ♀ dark brown with narrow white discal patch F and H.

**albocoerulea*, M. (26-34). The Albocoerulean. Simla—Karens. R.

H. 20. Lycænopis.—(contd.)

7a (4b). Below always at least traces of the submarginal lunules as well as of the marginal spots.

7b (11a). Unh always a spot base 2 anterior to the spot mid cell (present sometimes in Nos. 14 and 15). Unf always a discal spot in 1 and spot in 4 F and H more or less oblique.

7c (10). Unh discal spot in 7 not conspicuously larger than the remaining spots.

7 (8a). Unh discal spot in 6 midway between the spot in 5 and the bar end cell. Below pale grey and markings grey, except for the basal and costal spots H, which are black. ♂ above blue, border 1mm.

musina musinoides, Swin. (26-30.) Swinhoe's Hedge Blue. Assam—Shan States. NR.

8a (7). Unh discal spot in 6 much nearer bar end cell.

8 (9). Below white and all markings dark brown; unh discal spot in 4 only slightly oblique and no longer than the spot in 2. ♂ above rather pale violet blue, border a thread.

singalensis, Fd. (34-39). The Singhalese Hedge Blue. Ceylon. R.

9 (8) Below pale grey; unh spot in 4 highly oblique, elongated and much longer than any other spot. ♂ above costa and termen broad dark brown, disc white and base dull blue; H dark brown with a narrow white discal patch and base dull leaden blue.

dohertyi, Tyt. (32). The Naga Hedge Blue. Nagas. VR.

10 (7c). Unh discal spot in 7 round, large, far more prominent than any other spot. Below pale grey, markings prominent. ♂ above bright shining blue, border 2mm; in DSF a white patch on disc F; ♀ with a broad, well defined straight edged white band on F and most of H is white in the DSF.

**transpecta*, M. (28-36). The White-banded Hedge Blue. Sikkim—Burma. Nicobars. NR.

11a (7b). Unh no spot base 2 (except in individuals of Nos. 14 and 15).

11b (18a). Below markings never so regular as in 18a and almost invariably a discal spot in 1 unf.

11 (12a). Unf discal spot in 7 large, far larger than any other spot.

11a (11b) Unh discal spots in 4 and 5 midway between end cell and margin. Below white or very pale grey. ♂ above metallic blue, border 2mm. ♀ black with a narrow white discal patch upf, inwardly bordered with dull blue scales.

α. Larger and paler blue; uph border continuous dark brown. Below markings fainter and more linear.

melaena melaenoides, Tyt. (28). The Metallic Hedge Blue. Manipur. VR.

β. Smaller and darker; border uph may be broken into spots. Below markings larger and darker.

melaena melaena, Doh. (24-26). Tavoy—S. Burma. R.

11b (11a). Unh discal spots in 4 and 5 much nearer margin. Below chalky white, markings prominent. ♂ above metallic blue, border 4mm. at apex F, 1 mm. elsewhere: upper discal white patch H. ♀ above large white discal areas.

coessæa distantii, Fruh. (28) The Chalky Hedge Blue, Mergui. VR.

12a (11). Unh discal spot in 7 not markedly larger than any other spot. ♀ with prominent white discal areas usually.

12b (14a). Unf upper edge vertical spot in 3 joins or is directed to the outer edge of the oblique or horizontal spot in 4.

H. 20. *Lycænopsis*.—(contd.)

12 (13). Unh spot in 7 linear. Below pale grey, submarginal marking faint. ♂ above rather dark shining blue, border 1mm.; upf with 2 conjoined, sharply defined, white patches at bases 2 and 3 and a similar patch in 6 H.

albidisca, *M.* (32-38). The Whitedisc Hedge Blue. S. India. NR.

13 (12). Unh discal spot in 7 round. Below grey, markings large and coarse in DSF, narrow in WSF. ♂ above dark shining blue, border 2mm. and a large white discal patch F and H.

marginata, *DeN.* (30-36). The Margined Hedge Blue. Kumaon—Karens. NR.

14a (12b). Unf discal spots in 3 and 4 never arranged as in 12b.

14b (16a). Unf discal spot in 2 highly oblique, pointing to spot end cell; spot in 4 also oblique and pointing to spot end cell, spot in 3 vertical and pointing to the centre of spot in 4. Below markings very coarse in DSF, narrower in WSF. Unh discal spot in 4 oblique and elongated and often a spot base 2. Sometimes unf there is an additional costal spot over spot in 6 and unh a spot at extreme base 7, present in no other species.

14 (15). Unf inner edges discal spots 2-5 very irregular. ♂ above shining blue.

a. ♂ above as β, darker and more uniform lavender blue: upf borders narrower.

puspa lavendularis, *M.* (28-35). The Common Hedge Blue. Ceylon. C.

β. ♂ above with prominent white patches in DSF; border F 1½mm, dilated at apex.

**puspa gisca*, *Fruh.* (28-35). India, Burma. C.

γ. Intermediate between a and β.

puspa telis, *Fr.* Andamans.

δ. ♂ paler blue and no white patches. ♀ white areas very restricted and dusky.

puspa cyanescens, *DeN.* (27-32). Nicobars. NR.

15 (14). Unf inner edges of spots 2-5 on an even arc. ♂ shining blue, border 1-1½mm, dilated at apex, no white patches.

lilacea, *Hamp.* (29-32). Hampson's Hedge Blue. S. India. R.

16a (14b). Unf discal spot in 2 vertical or slightly oblique, pointing to spot in 6.

16 (17). Below grey; unf discal spot in 1 almost invariably present. ♂ above blue, border narrow.

a. Below spots irregular; unf spot in 4 very oblique. ♂ upf border very narrow and not or very faintly dilated at apex. ♀ border narrow and no white patches.

limbata amitra, *Fruh.* (28-32). The Plain Hedge Blue. Ceylon. NR.

β. Below spots much more regular. ♂ above as last. ♀ with much broader borders.

limbata limbata, *M.* (28-32). S. India—Bengal. NR.

γ. Below markings broader, regular or irregular. ♂ upf border broader and always prominently dilated at apex.

limbata placida, *M.* (28-34). Sikkim-Burma. C.

17 (16). Below white, markings small; unf spot in 1 present or absent. Unh spot in 4 usually oblique and elongate and spot in 3 minute or absent. ♂ above rather pale blue, border a thread, white discal patches present or absent.

* *cardia dilecta*, *M.* (28-32). The Pale Hedge Blue. Simla—Karens. NR.

18a (11b). Below pale grey, markings small and regular; unf never a discal

H. 20. Lycænopsis.—(contd.)

spot in 1 and unh spot in 4 never more than very slightly oblique; spots in 2-5 unh on an even flat arc.

18 (19). Larger. ♂ above border very narrow and regular on F and H not dilated at apex.

α. Paler. Below markings smaller.

huegeli huegeli, M. (34-40). The Large Hedge Blue. Kashmir—Kumaon. C.

β. Much darker blue. Below markings larger and clearer.

huegeli oreana, Swin. (38-40). Bhutan to Assam to 8,000 feet. NR.

γ. As last, but smaller. Below markings small and more or less obsolete.

huegeli oreoides, Evans. (32-35). Sikkim—Assam over 8,000 feet. R.

19 (18). ♂ above border dilated at apex. Smaller.

α. ♂ never with white patches above, border F 1mm. Below white and markings black.

argiolus coelestina, Koll. (25-32). The Hill Hedge Blue. Chitral—Kumaon. C.

β. ♂ above with prominent discal white patches in DSF; border very variable, but usually much wider, 2mm. Below white to grey and markings may be black or grey.

argiolus jynteana, DeN. (28-34). Sikkim—Burma. C.

H. 21. Chilades.—The Lime Blue. (Plate 27.)

Above blue. Below pale brown with large spots arranged as usual; unf with an additional costal spot in the angle formed by the junction of v9 with v7, always a spot in 1; unh always spot base 2 and the discal spot in 6 shifted in. In DSF unh there is a large clouded discal patch.

α. Smaller. ♂ above dark border linear. ♀ WSF dark brown, bases metallic blue; DSF rather pale blue with a broad border.

**laius laius*, Cr. (26-30). The Lime Blue. Ceylon, India, N. Burma—Moulmein. C.

β. Larger. ♂ above dark border diffused inwards and uph with prominent marginal black spots. ♀ paler blue with broad borders. Below markings much darker and more pronounced; seasonal difference not nearly so marked.

laius tavoyana, Evans. (30-35). Tavoy. R.

H. 22. Zizera.—The Grass Blues. (Plate 27.)

Small low flying insects. Below pale grey to brown; unh always a spot base 2 under spot mid cell.

1 (2a). ♂ ♀ above dark brown. Unh with a marginal row of jewelled metallic spots; basal and costal spots black, rest dark brown; unf no spot in cell or on costa internal to the discal band.

α. Uph dark marginal spots in ♂ faint and not orange crowned; below brown and jewelled spots not prominently orange crowned.

**trochilus putli*, Koll. (15-22). The Grass Jewel. Ceylon. S-NE. India. Burma. C.

β. H marginal spots prominently orange crowned above and below; paler below.

trochilus trochilus, Frey. (15-20). N.W. India. C.

2a (1). ♂ above blue. 2b (6) Unh no jewelled spots or orange markings.

2b (5). Unh discal spot in 6 midway between spots in 5 and 7, always a discal spot in 1.

2d (4). Unf with a spot in cell and a spot in 7 on costa between the discal spot in 6 and the spot end cell.

2 (3). Larger. ♂ above pale blue, border broad. ♀ dark brown with more or less basal blue suffusion. Unf often small spot base 1.

H. 22. Zizera.—The Grass Blues. (Plate 27.)—(contd.)

a. Below markings small and on H nearly obsolete. ♂ above very pale silvery blue.

maha ossa, Swin. (26-30). The Pale Grass Blue. S—Central India. VC.

β. Below markings always more prominent. ♂ above usually darker and very variable.

maha maha, Koll. Central—N. India. Burma. VC.

3 (2). Small. ♂ above dark blue with broad borders. ♀ normally plain brown, but may have some basal blue suffusion. Below grey with the spots all small, black and well defined.

**lysimon*, Hub. (18-24). The Dark Grass Blue. Ceylon, India, Burma, Andamans. C.

4 (2c). Unf no spot in cell; 2 small costal spots on either side of the spot end cell. Below white, markings all small, black and well defined; marginal markings unusually sharp. ♂ above dark blue with a broad border; ♀ plain brown.

gaika, F. (16-24). The Tiny Grass Blue. Ceylon, India, Burma, Andamans. C.

5 (2b). Unh discal spot in 6 shifted in, not in line with spots in 5-7, no costal spots or spot in cell. ♂ above dark blue with broad borders; ♀ brown with more or less basal blue suffusion.

a. Below spots prominent; unf discal series very large.

otis decreta, But. (19-26). The Lesser Grass Blue. Ceylon. S-Central India. C.

β. Below spots small, often nearly obsolete; spots unf never more prominent than the spots unh.

otis ois, F. (19-26). N. India—Burma, Andamans, Nicobars. C.

6 (2 b). Unh 2 prominent jewelled black tornal spots also 2 prominent black costal spots and a spot in cell: remaining markings below grey, cate-nulated. ♂ above violet blue, very narrow, dusky border; ♀ brown.

galba phiala, GG. (20—24). The Persian Grass Blue. Idak, Waziristan. R.

H. 23. Lycæna.—The True Blues. (Plate 27).

Blue or dark brown above; below various patterns, general arrangement of the spots being the same; unh spot in 6 nearly always midway between 5-7 and usually a spot base 2.

1 (2a). Unh with a spot base 8. Below white with numerous very large black spots, which show through above; unf with spot in cell and discal row curved in so that spot in 2 comes under spot end cell. Above white with broad dark brown border; in ♂ the white area is suffused pale blue; in ♀ blue only at base.

**atroguttata*, Doh. (44-48). The Great Spotted Blue. Naga-Chin Hills. R.

2a (1). Unh never a spot base 8 and never white above.

2b (12a). Unh discal spots black, not white.

2c (10a). Unh no basal green scaling or, if so, very faint and not sufficient to obscure the basal spots.

? (3a). Unf with spot in cell and the cilia prominently chequered. Unh marginal spots prominently orange crown. Above ♂ pale to rather dusky blue with a more or less broad border; prominent bars end cells. ♀ brown.

**baton cashmirensis*, M. (27-31). The Kashmir Blue. Chitral-Kashmir and Ladak. NR.

3a (2). Unf never a spot in cell and cilia unchequered.

3b (7a). Unf with metallic spots on margin.

3 (4a). Unh small metallic spots along entire margin and marginal spots F and H faintly orange crowned; unf discal spots large, unh small and regular.

H. 23. *Lycæna*.—(contd.)

Above ♂ dull violet blue, border narrow; ♀ brown with basal blue suffusion.

christophi samudra M. 30-34.) The Small Jewel Blue. Baluchistan, Chitral Kashmir. R.

4a (3). Unh metallic spots confined to tornus.

4 (5a). Below complete row large orange marginal spots, only faint traces of a metallic spot in 2 near tornus H; discal spots, very regular and nearer margin than usual; unh spot in 1 not shifted out of line as usual. Above ♂ violet blue, border linear, with orange spots at tornus H; ♀ brown with orange marginal spots at tornus F and H.

**pylaon indica*, Evans. (29-31). The Baluchi Jewel Blue. Baluchistan. R. (Compared with *pylaon*, Fisch, from S. E. Russia, the spots below are more regular and the tornal orange markings are reduced. This race also occurs in W. Thibet.)

5a (4). Below only orange at tornus H, crowning prominent metallic scales in 1 and 2; unf discal spot in 2 shifted in under spot end cell.

5(6). ♂ above blue with rather broad dark border; ♀ brown with prominent orange tornal spots H and often with a postdiscal row of white spots F and H. Below all spots large and prominent; unf discal spot in 2 elongated; submarginal lunules coalesced to a broad dusky band; tornal metallic and orange spots H large and prominent.

a. upf borders narrow.

loewii chamanica, M. (32-36). The large Jewel Blue, Baluchistan. NR.

β. upf dark borders broad.

**loewii sanoga*, Evans. Chitral-Ladak. NR.

6 (5). ♂ ♀ above very dark bronzy brown, prominent spot end cell F. Below discal markings prominent, marginal small and fainter.

**iris ashretha*, Evans. (25-29). The Chitral Jewel Blue. Chitral. NR. (Darker than true *iris* from C. Asia).

7a (3b). Unh no metallic spots.

7b (9). Below no orange submarginal spots.

7 (8). Unf and unh discal spot in 3 markedly shifted out of line towards margin. Below discal markings prominent, marginal faint. Above ♂ rather pale blue, diffused, rather narrow border and upf discal spots showing as well as spot end cell; ♀ brown, upf discal spots show faintly.

**cytis*, Lang. (24-26). The Shandur Spotted Blue. Chitral. R.

8 (7). Unf and unh discal spots regular; marginal markings prominent. Unf coppery brown; unh white. Above ♂ ♀ dark brown with black spot end cell upf.

astorica, Tyt. (29-31). The Astor Argus. Astor. R.

9 (7b). Below complete prominent row submarginal orange spots, which appear above, complete in the ♀, more or less so in the ♂. Above ♂ ♀ dark brown with a black spot end cell upf. Unf discal spot in 2 shifted in under spot end cell; unh discal spot in 6 shifted in and adjoining spot in 7.

**astrarche*, Berg. (25-30). The orange bordered Argus. Chitral-Kumaon. C.

10a (2c). Unh with prominent basal green scaling, which obscures the basal spots.

10 (11). Unh marginal spots more or less orange crowned; marginal markings faint on F. Unf and unh discal spots very regular; unh discal spot in 2 in line with the rest. Unh bar end cell triangular and prominently white edged, often with a prominent white streak thence to mid termen. Very variable and in some specimens the discal spots below are completely absent. Above ♂ ♀ unmarked dark brown.

H. 23. *Lycæna*.—(contd.)

eumedon antiqua, *Slg.* (28-32). The Chitral Argus. Chitral-Gilgit. R.

11 (10). Unh marginal markings obsolete; all discal spots below small and regular, becoming obsolete towards tornus F and H. Above ♂ dull violet blue with very broad borders. Unh spot end cell nearly white.

semiargus annulata, *Elwes.* (28-32). The Dull Chumbi Blue. Chumbi. R.

12a (2b). Unh discal spots, if present, white: marginal markings absent.

12b (16a). Unh with metallic green scaling extending to termen or at least well beyond discal band. Unf discal spots nearly always black and all marginal markings F and H absent.

12 (13a). Above ♂ ♀ dark brown; unh no discal spots and with more or less metallic spots at tornus.

youngusbandi, *El.* (28-30). The Chumbi Green Underwing. Chumbi. R.

13a (12). Above ♂ blue; unh with white discal spots as a rule.

13 (14-15). Above ♂ rather pale blue, with sharply defined dark border, 2mm; ♀ plain brown. Unf grey.

metallica, *Fd.* (26-30). The Small Green Underwing. Chitral-Ladak. R.

14 (13-15). ♂ above dusky violet blue shading to a broad dark border, 4mm; on H blue colour usually confined to the base. ♀ plain brown. Unf much darker, brown not grey.

**omphissa*, *M.* (30-32). The Dusky Green Underwing. Kashmir, Ladak-Lahoul. R.

15 (13-14). ♂ above violet blue, border not over 2mm. Larger.

a. ♂ above dark border 1mm, increasing to 2mm. at tornus F and on H; ♀ above sometimes plain brown. Unf diffused submarginal dark patches above tornus.

galathea chitralica, *Evans.* (34-39). The Large Green Underwing. Chitral. NR.

β. ♂ above dark border 1mm, even throughout. ♀ brown with large orange marginal spots above tornus F and H. Unf the discal spots are sometimes white.

galathea galathea, *Blanch.* (32-37.) Kashmir-Kumaon. NR.

16a (12b). Unh metallic green scaling basal or absent.

16b (18). Upf never a spot end cell. 16 (17); Above ♂ violet blue, ♀ brown with rarely any blue scaling at base. Below very variable, more so than any other *Lycaena*. Unf pale grey, a spot end cell and a regular discal row which are usually black but may be white, only rarely a spot in 1. Unh varying from entirely greenish white to entirely brown or may be centrally brown and rest greenish white, metallic green suffusion present or absent. Unh the spotting equally variable; usually spots large and white, but may rarely be small and black; typically with a straight discal row 2-5 pointing to apex, conjoined discal spot 6-7, basal spot in 7, spot end cell and mid cell usually conjoined; rarely the spot in 6 is central between spot in 5-7; sometimes spots very enlarged, sometimes entirely absent.

a. Rather smaller and paler.

pheretes lehana, *M.* (24-28). The Mountain Blue. Chitral-Kumaon, over 12,000 feet. NR.

β. Rather larger and darker.

**pheretes pharis*, *Faw.* Sikkim. NR.

17 (16). Above shining sky-blue, with very rarely prominently chequered cilia.

asiatica, *Elwes.* The Sikkim Mountain Blue. Sikkim. NR.

18 (16b). Upf with a prominent spot end cell.

H. 23. *Lycæna*.—(contd.)

α. Above without any discal white spots (sometimes obscure in ♀). ♂ greenish blue with a broad border 2mm; ♀ plain brown. Unf grey with a prominent black spot in cell, discal row curved bringing spot in 2 under cell spot and always a spot in 1. Unh outer third white, central third brown, base more or less metallic green; large white spot end cell, conjoined spot 6-7 (rarely with black centres), rarely small black spot base 1; rarely a discal row of conjoined white spots is perceptible as separate from the white margin.

**orbitulus walli*, Evans. (28-30). The Greenish Mountain Blue. Chitral. R.

β. Above with a more or less complete series of prominent white discal spots F and H and always a black centred white spot end cell F and usually H; dark brown, overlaid with greenish blue scales from the base outwards of varying extent, less extensive in ♀ or absent. Below as last, but unf spots more regular and often more or less obsolete; unh as last, but all spots entirely white and larger; discal spots in 6-7 usually united to the white border.

orbitulus jaloka, M. (25-29). Kashmir. R.

γ. As last, but upf with a white spot end cell.

orbitulus leela, DeN. Ladak, Pangi. R.

H. 24. *Polyommatus*.—The Meadow Blues. (Plate 127).

Close allies of *Lycæna*. ♂ above always blue. Below spots black and white ringed. Unh nearly always a spot base 2, discal spot in 1 in line with spots in 1a and 2 and discal spot in 6 central between spots in 5-7.

1a (3a). Unf with a spot in cell and another often below it in 1; may be absent in specimens with ill-developed spots. Usually with orange marginal spots below, never any metallic spots.

1 (2). ♂ above uniform lilac blue, border linear, blue colour never shades to border nor are veins darkened before reaching it; never a black spot end cell F. ♀ very variable, from plain brown to dusky blue with broad borders and marginal orange spots. Unf discal spots 4, 5 and 6 on a curve. Unh spot in 6 usually rather nearer to spot in 5.

α. Above bright lilac blue. Below spots very small and uniform, no white patches H.

**icarus fugitiva* But. (30-32). The Violet Meadow Blue. Baluchistan. C.

β. Above duller. Below more variable, marginal orange spots better developed and sometimes traces of white patches H.

icarus chitralensis, Swin. (30-36). Chitral. C.

2 (1). ♂ above very variable, border variable, often diffused and veins always slightly blackish just before the border. ♀ more constant, rarely any blue above and large orange submarginal spots usually well developed. Unf spots in 4, 5 and 6 in a straight line or nearly so. Unh spot in 6 usually nearer spot in 7.

α. ♂ above very pale silvery blue, border a thread. Below markings small, marginal orange spots nearly obsolete, no white patches H.

eros balucha, M. (28-34). The Common Meadow Blue. Baluchistan. R.

β. ♂ above as last, but border broader, 1mm. Below orange spots very large, but rather pale, no white patches H.

eros drunela, Swin. (28-34). Safed Koh. NR.

γ. ♂ above more lilac blue and dusky, borders more or less diffused, 1½-2mm; usually a spot end cell F and traces of marginal spots H. Below variable, marginal orange spots small, but dark, white patches usually prominent on H. Varies a good deal with the season and the elevation.

H. 24. *Polyommatus*.—(contd.)

eros droshana, *Evans.* (32-40). Chitral. NR.

♂. Small, ♂ above pale violet blue, border narrow, 1mm., slightly diffused. Below markings small and tending to obsolescence, white patches H prominent.

eros stoliczana, *Fd.* (30-34). Ladak. NR.

♂ spring form brilliant violet blue, summer form pale shining blue, border 1mm.; very much as β but larger. Below as γ.

**eros pseuderos*, *M.* (32-35). Kashmir, Murree. NR.

ξ ♂ above bright metallic blue, border F 1½ mm. Below grey, marginal orange markings nearly or quite obsolete and white markings prominent, especially the white transverse streak from base to mid termen H.

eros ariana, *M* (38). Kangra, Kulu, Spiti to Kumaon. NR.

η. ♂ varying from pale lilac blue with narrow margins and obsolescent markings below to a rather deep brilliant blue with black marginal spots uph and below chalky white with prominent large submarginal orange spots. ♀ variable.

eros arene, *Fawcett.* (30-35). Chumbi Valley, Bhutan NR.

3a (1a). Unf no spot in cell or in 1 below cell.

3b (5a). Unh basal spots absent except for that in 7 and the spot mid cell may be traceable. Above unmarked and border a thread.

3 (4). Below marginal markings prominent and on H crowned orange; unf submarginal spots conjoined to a broad dusky band, marginal spots absent, discal spots curved round so that spot in 2 comes under spot end cell, spot in 6 shifted in and no spot in 1. Unh spot in 6 central between spots in 5-7, spots 2-5 on an arc, spot on 1 shifted out and spot in 1a absent. Above ♂ pale silvery blue, border a thread. Apex F pointed.

poseidon poseidonides, *Stg.* (40). The Silvery Meadow Blue. Baroghil Pass, Chitral. R.

4 (3). Below marginal markings entirely absent; uniform very pale grey brown. Unf discal spots in a nearly straight line, getting nearer margin at lower end, spot in 1 present, double. Unh spot in 6 slightly shifted in and nearer spot in 7, spots 2-5 on an arc, double spot in 1 and spot in 1a shifted out, close together. Above ♂ shining lilac blue, border a thread. Wings broad.

iolas, *Ochs.* (38). The Gilgit Meadow Blue. Gilgit. VR.

5a (3b). Unh the row of 4 basal spots prominent. Below all spots large, never any orange submarginal spots F, usually present on H and often metallic spots at tornus.

5 (6). Unh discal spot in 6 much nearer spot in 7 than spot in 5; basal row 4 spots not quite in line, that in 1 slightly shifted in; marginal orange spots obsolete. Unf discal spot in 1 present or absent. Upf prominent spot end cell.

a. Above ♂ rather dull blue, border 1-2mm, on H broken into large marginal spots.

devanica gracilis, *Evans.* (24-30). The Dusky Meadow Blue. N. Chitral R.

β. Above ♂ bases only dusky blue, border 4mm. or more, the blue colour often extending through cell and along costa to apex.

devanica devanica, *M.* (30-34). Chitral, Kashmir, Ladak. R.

6 (5). Unh discal spot in 6 central between spots in 5-7; basal 4 spots in line, marginal orange spots more or less well developed.

a. ♂ above bright blue, border very narrow, marginal spots H. Upf no spot end cell and unf no spot in 1. ♀ above with very large submarginal orange

H. 24. Polyommatus.—(contd.)

spots F and H and black marginal spots H ; on F the orange colouring sometimes spreads to the disc.

**sarta sartoides*, Swin. (35-38). The Brilliant Meadow Blue. Chitral. R.

β. ♂ above dull dusky blue evenly extended to the dark brown border. Upf with spot end cell ; unf with discal spot in 1. ♀ varying from plain brown to an approach to last with submarginal orange spots appearing above.

sarta rupala, Tyl. (32-36). Astor. R.

H. 25. Una.—The Una. (Plate 27).

Above ♂ dark purple brown, border narrow ; ♀ sky blue upf with broad borders and uph pale brown with blue scales at the base. Below pale ochreous brown of a peculiar shade, bearing small black spots arranged as usual, marginal markings obsolete ; small double spot in cell F, no spot in cell H ; the 2 costal spots H more prominent than the rest ; all spots tend to obsolescence.

**usta*, Dist. (24-27). The Una. Assam—S. Shan States. R.

H. 26. Orthomiella.—The Straightwing Blue. (Plate 27).

Above ♂ dark shining purple, border a thread, cilia chequered and elongated at tornus H ; ♀ shining blue, border broad. Below brown with dark catenulated spots arranged as usual ; marginal markings nearly obsolete ; unf a spot in cell and in 1 below it ; unh dorsal half from base to discal band darkened, covering all the markings.

**pontis pontis*, Elwes. (28-32). The Straightwing Blue. Sikkim-Assam. R.

β. Smaller. Wings more pointed. Browner above and yellower below.

pontis rovorea, Fr. N. Burma. VR. (Fr.).

H. 27. Syntarucus.—The Zebra Blue. (Plate 27).

Above ♂ violet blue ; ♀ base blue with a white discal area F bearing black spots. Below with alternate broad and narrow bands at right angles to the costa, broken into spots on H. Markings variable and irregular, but quite different to any other species. Unh metallic spots at tornus.

**plinius*, F. (22-30). The Zebra Blue. Ceylon, India, Burma. C.

H. 28. Catachrysops.—The Forgetmenot. (Plate 27).

Above pale blue, border narrow. Below pale grey with catenulated bands ; unf the discal band broken into 2 portions and at the upper end there is a small spot on the costa internal to the band. Unh a single very large orange crowned spot at tornus.

I (2). Unf spot on costa midway between spot end cell and the discal band. Above ♂ violet blue. Below bands narrow and more catenulated.

**strabo*, F. (25-35). The Forgetmenot. Ceylon, India, Burma, Andamans, Nicobars. C.

2 (1). Unf spot on costa adjoins upper end of discal band. Above ♂ pale silvery blue. Below markings paler, broader, straighter and more confluent.

lithargyria, M. (25-35). The Silver Forgetmenot. Ceylon, Assam-Burma, Andamans. NR.

H. 29. Lampides.—The Peablu. (Plate 27).

Above ♂ violet blue, frosted over. Below pale brown, marked with fasciæ, no spots, except for 2 black ones crowned orange and metallic at tornus H ; marginal lunules F and H ; unf with a short fascia in cell, end cell and a discal

H. 29. Lampides.—(contd.)

band ; unh basal band, fascia end cell, discal band and a white band beyond.

* *boeticus*, Ramb. (24-36). The Peablue. Ceylon, India, Burma, Andamans, Nicobars. VC.

v. obsoleta, Evans. Except for the tornal spots H all the marginal markings F and H are absent. Andamans. NR.

The following are new names :

Poritia erycinoides elsiei. *Simiskina pasira dohertyi*. *Talicauda nyseus burmana*. *Euchrysops contracta nila* and *pandava lanka*. *Everes parrhasius pila*. *Lycaenopsis kuegelii orevides*. *Chilades laius taroyana*. *Lycaena pylaon indica*, *loewii sanogha*, *iris ashretha*, *galathea chitralica*. *Polyommatus eros droshana*. *Lampidesboeticus var obsoleta*. To be described by Gen. Tytler :—
Lycaena astorica and *Polyommatus sarta rupala*.

(To be continued.)
